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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application Of:) Atty. Docket No.: 47168-00033USC1
)
 Keith D. Beaty) Examiner: Paul Prebilic
)
 Application No.: 09/259,432) Group Art Unit: 3738
)
 Filed: March 1, 1999)
)
 For: Implant Surface Preparation)

DECLARATION OF PRABHU GUBBI

Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

I, Prabhu Gubbi, declare that:

A. I reside at 4445 SW Oakhaven Lane, Palm City, FL 34990.

B. I have degrees in Mechanical Engineering and Foundry Engineering from Bangalore University, India. I also have a Ph.D. degree in Materials Engineering from Auburn University. Since receiving my Ph.D., I have been employed as an engineer with several corporations where I have worked as a material scientist. Currently, I am a materials scientist with Implant Innovations, Inc ("3i").

C. In the course of my work at 3i, I have examined numerous surfaces of objects used in dental implantology. One of the machines that I use to examine these surfaces is a Scanning Electron Microscope (SEM). The machine that I use is made by Aspex Instruments LLC and its Model number is PSEM II. This machine is about 4 years old.

D. Within the past several months, I have reviewed several dental implant surfaces from other manufacturers. I understood that the purpose of my review was to develop a summary of competitive implant surfaces that were to be submitted to the U.S. Patent & Trademark Office in connection with the present patent application, which is assigned to *3i*.

E. When developing each implant sheet, I developed a picture of the package in which the implant came (assuming it had a package), an SEM picture at 25X of the implant, and an SEM picture at 2000X to see the microstructure on the implant surface.

F. I have tried to determine the manufacturing date of each implant as accurately as possible based on the information provided by implant manufacturers on the package. Most of the manufacturers have placed either a "sterilization" date or a "use before" date (i.e., "expiration" date) on the package. For those manufacturers that provide only a "use before" or "expiration" date, it was assumed that the implant was manufactured at least two years earlier. Some manufactures provide a "lot number" which suggests a manufacturing date in its code. Further, because it is my understanding that implant manufacturers have provided sterile implants to clinicians since at least 1990, any non-sterile implants were assumed to be from the 1980's.

G. Implants in 35 through 61 are from lawsuit civil action #91-C-4632, filed in the Northern District of Illinois related to US Patent #4,330,891, which was concluded in 1998. These implants are believed to have been made in the 1970s, 1980s or early 1990s. The extent, if any, of the sales or other public disclosure of these implants is currently not known.

H. The enclosed report contains one sheet on each of the following 61 implants.

1. Institut-Straumann AG - titanium plasma sprayed hollow cylindrical implant in an unsterilized package believed to be from the 1980's

2. Institut-Straumann AG - titanium plasma sprayed hollow cylindrical implant in an unsterilized package believed to be from the late 1980's
3. Calcitek - HA-coated "Integral Omniloc" implant believed to be from 1995
4. Calcitek - HA-coated "Integral Omniloc" implant believed to be from 1990
5. Imtec - HA-coated implant distributed by Osteomed Inc. believed to be from 1994
6. Interpore - HA-coated implant believed to be from 1989
7. Interpore - titanium plasma sprayed implant believed to be from 1993
8. Minimatic - titanium plasma sprayed implant believed to be from 1993
9. Stryker - HA-coated implant believed to be from 1987
10. The "O" Company - push-in implant with blasted surface believed to be from 1994
11. Implamed - HA-coated implant believed to be before 1992
12. Collagen Biomedical - HA-coated implant believed to be from 1991
13. Steri-Oss - HA-coated implant believed to be from 1990
14. Friedrichsfeld - titanium plasma sprayed implant believed to be distributed in Germany in 1991
15. Lifecore Biomedical - titanium plasma sprayed implant believed to be from 1995
16. Stryker - titanium plasma sprayed implant believed to be from 1992
17. Mathys - threaded implant believed to be from 1992
18. Nobelpharma - machined implant believed to be from 1991
19. Nobelpharma - machined implant believed to be from 1987

20. Miter, Inc. - blade-style implant with blasted surface believed to be from 1986
21. Miter, Inc. - blade-style implant with blasted + etched surface believed to be from 1987
22. Astra Dental - machined implant believed to be before 1996
23. Calcitek - HA-coated "Integral SD" implant believed to be from 1988
24. Lifecore Biomedical - HA-coated implant believed to be from 1995
25. Lifecore Biomedical - machined implant believed to be from 1995
26. Collagen Biomedical - machined implant believed to be from 1990
27. Institut Straumann - titanium plasma sprayed hollow screw implant in an unsterilized package believed to be from the 1980's
28. Institut Straumann - titanium plasma sprayed screw implant in an unsterilized package believed to be from the 1980's
29. Astra Tech - screw implant with blasted surface believed to be before 1997
30. Core-Vent - screw implant with blasted surface believed to be from 1996
31. Straumann - titanium plasma sprayed implant believed to be before 1996
32. Institut Straumann - titanium plasma sprayed implant believed to be before 1995
33. Dentsply Core-Vent - HA-coated implant believed to be before 1996
34. Dentsply Core-Vent - machined implant believed to be before 1996
35. Cherchev Implant – implant appears to have blasted surface
36. Samson Titanium Screw – implant appears to have machined surface
37. Oratronics Spiral – implant appears to have a slightly roughened surface
38. Oratronics Blade – implant appears to have a slightly roughened surface
39. Synthodont – implant appears to have a blasted surface

40. Vitradent – implant appears to have a slightly roughened surface
41. Zimmer Mandibular Staple – implant appears to have blasted surface
42. MI-150-TI – implant appears to have machined surface
43. Ti 1968-70 – implant appears to have a slightly roughened surface
44. Cast Vitallium Surgical – implant appears to have a blasted surface
45. Park Dental – implant appears to have a slightly roughened surface
46. Babbush Implants – implant appears to have blasted surface
47. Oratronics – implant appears to have a slightly roughened surface
48. Swingos – implant appears to have a slightly roughened surface
49. Konkoly – implant appears to have a slightly roughened surface
50. Sulzer Protusil – implant appears to have a titanium plasma sprayed surface
51. IRC Curved – implant appears to have a slightly roughened surface
52. Oratronics – implant appears to have a slightly roughened surface
53. Hamilton – implant appears to have a slightly roughened surface
54. Barton Partial – implant appears to have blasted surface
55. Arenson – implant appears to have blasted surface
56. IRC Clinical Retrieval – implant appears to have a slightly roughened surface
57. Park Dental – implant appears to have blasted surface
58. Oratronics – implant appears to have a slightly roughened surface
59. Interplant – implant appears to have blasted surface
60. Subperiosteal – implant appears to have a slightly roughened surface

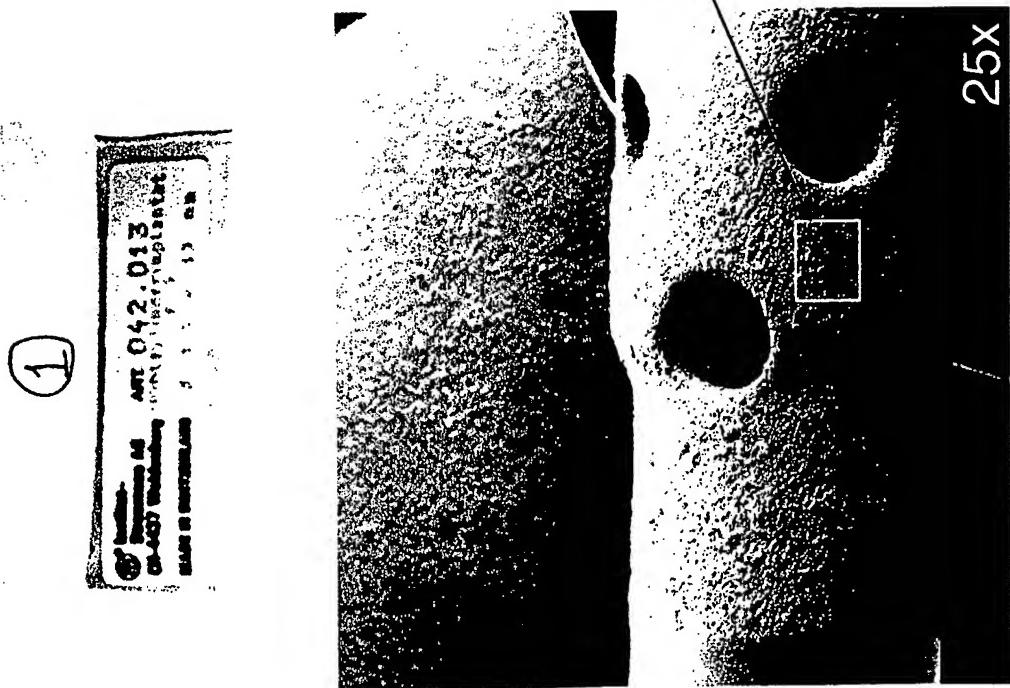
61. Continuous Blade - implant appears to have a machined surface

Date: 11-02-2001

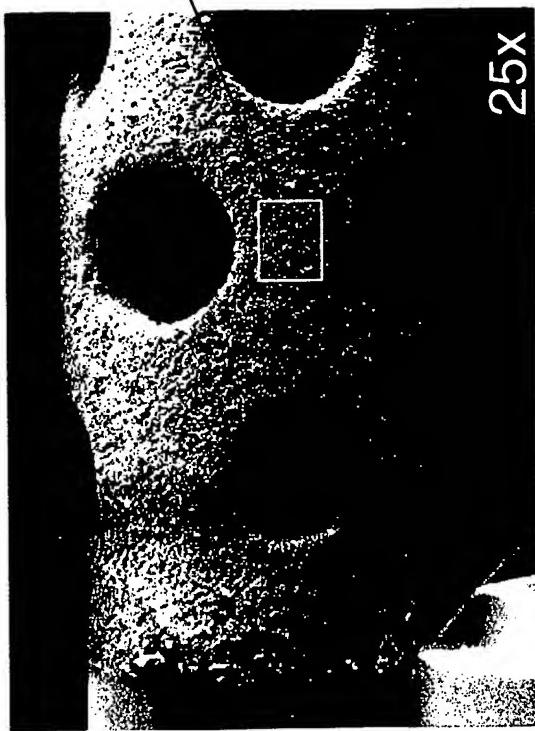
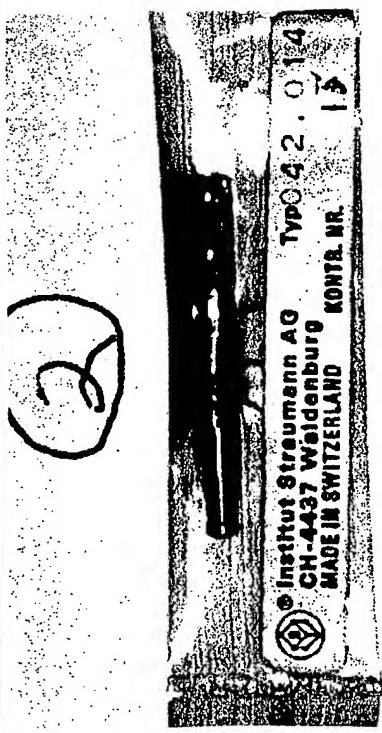
Prabhu Gubbi



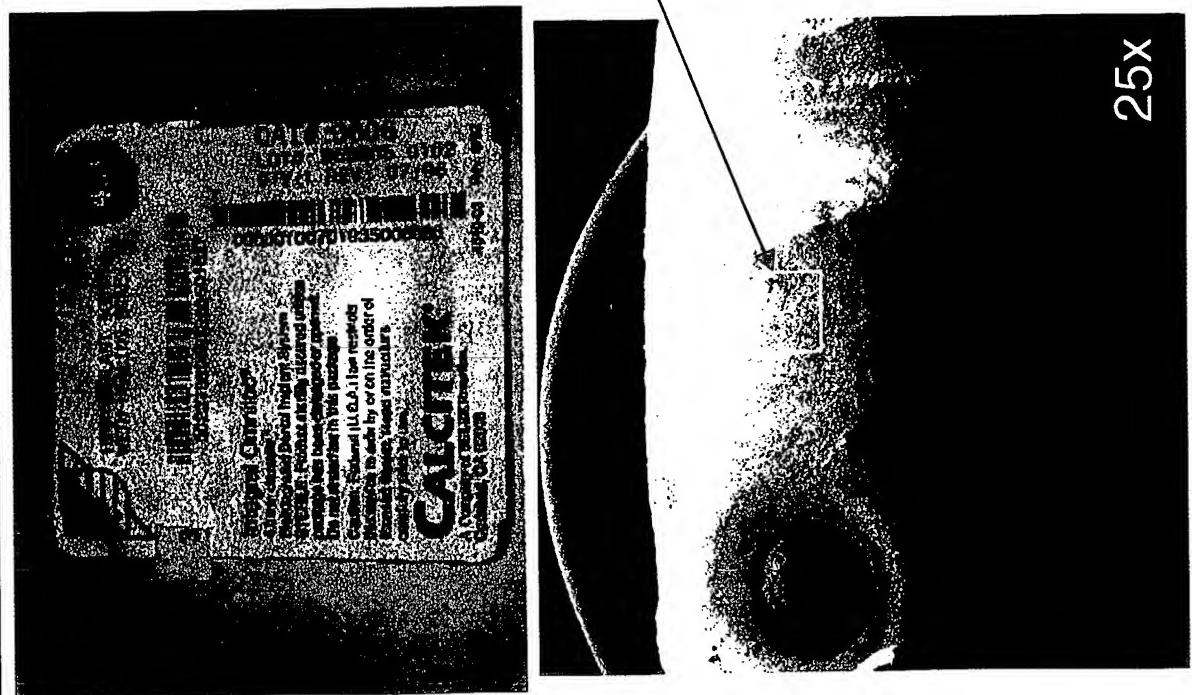
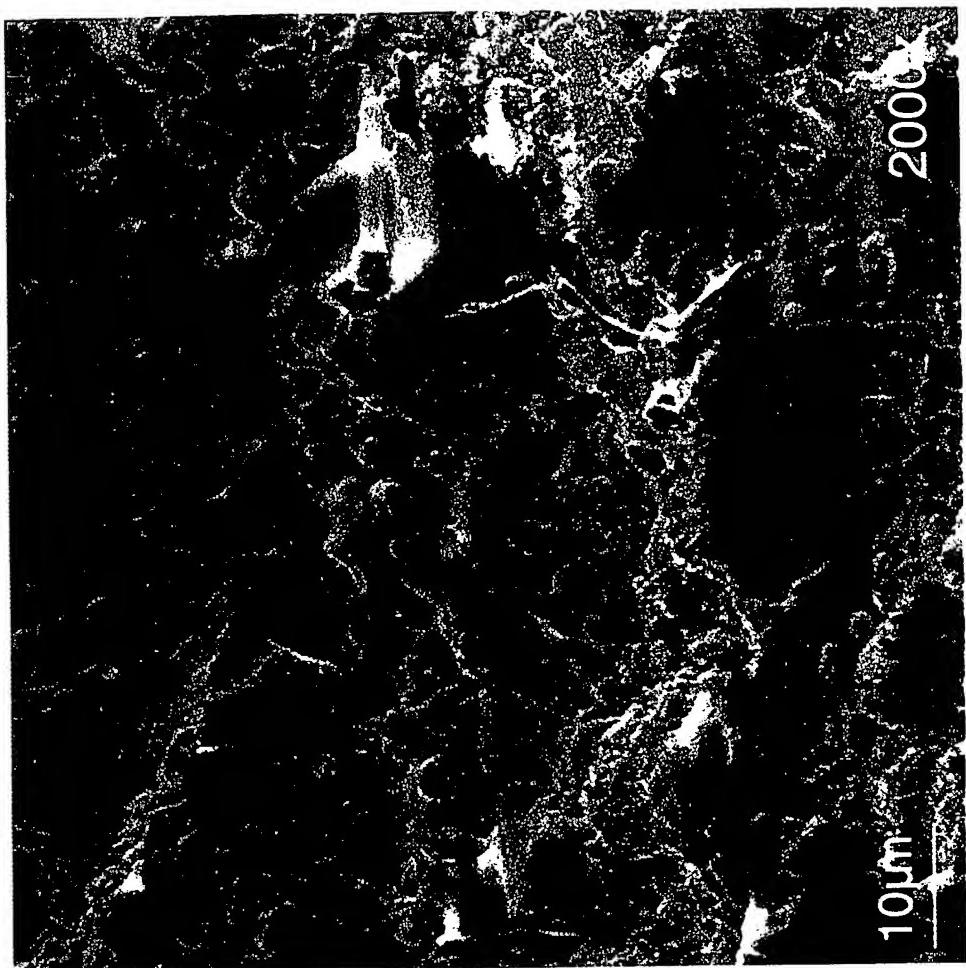
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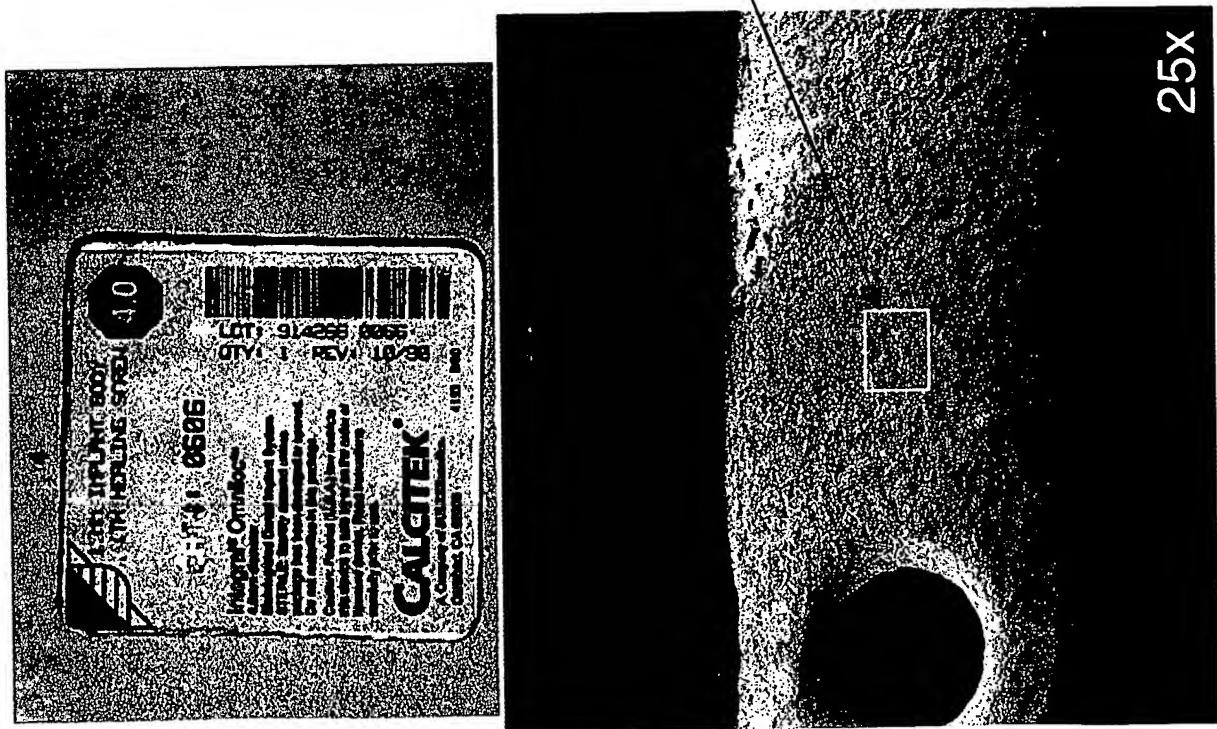
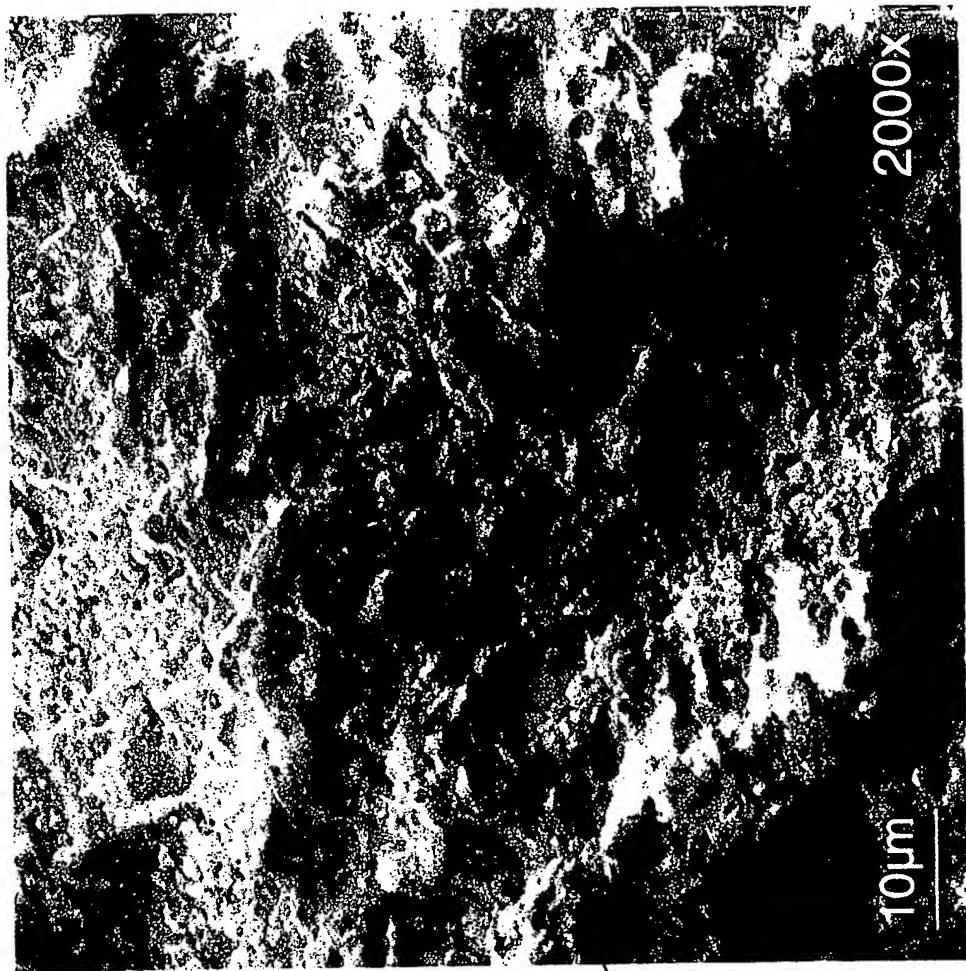
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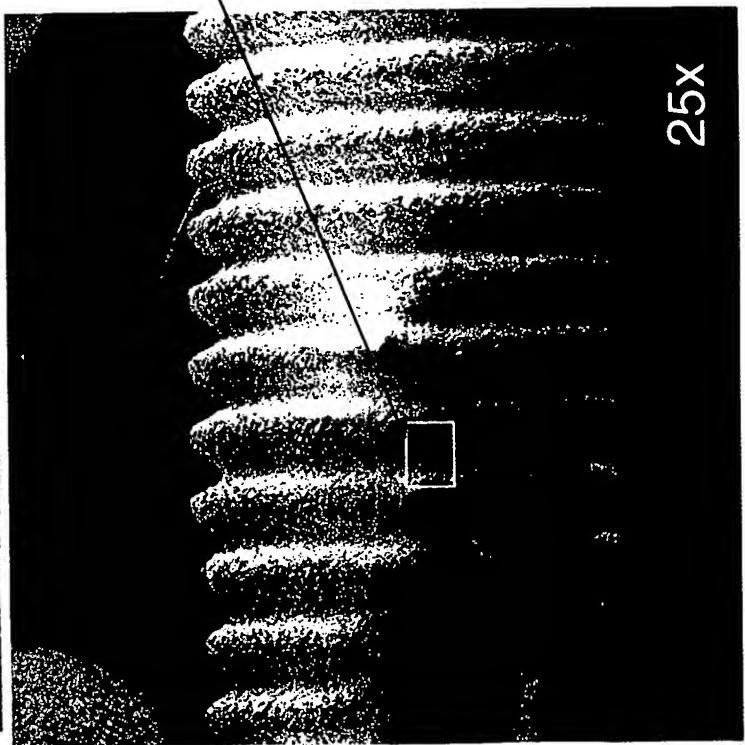
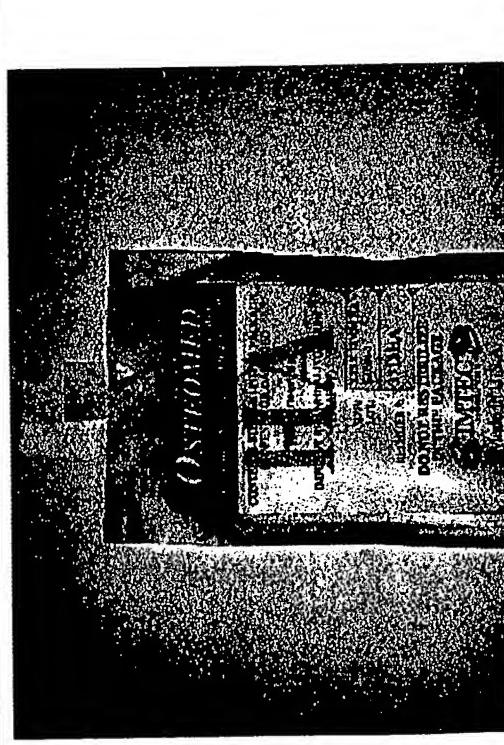
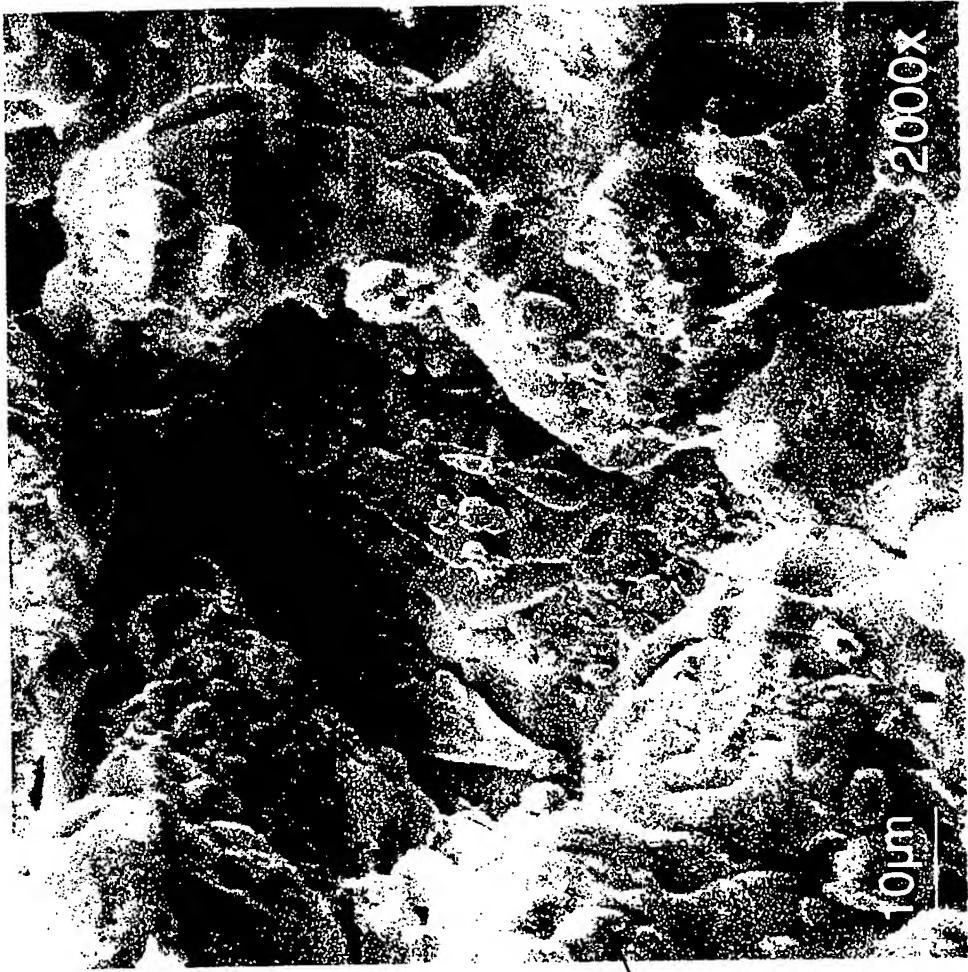
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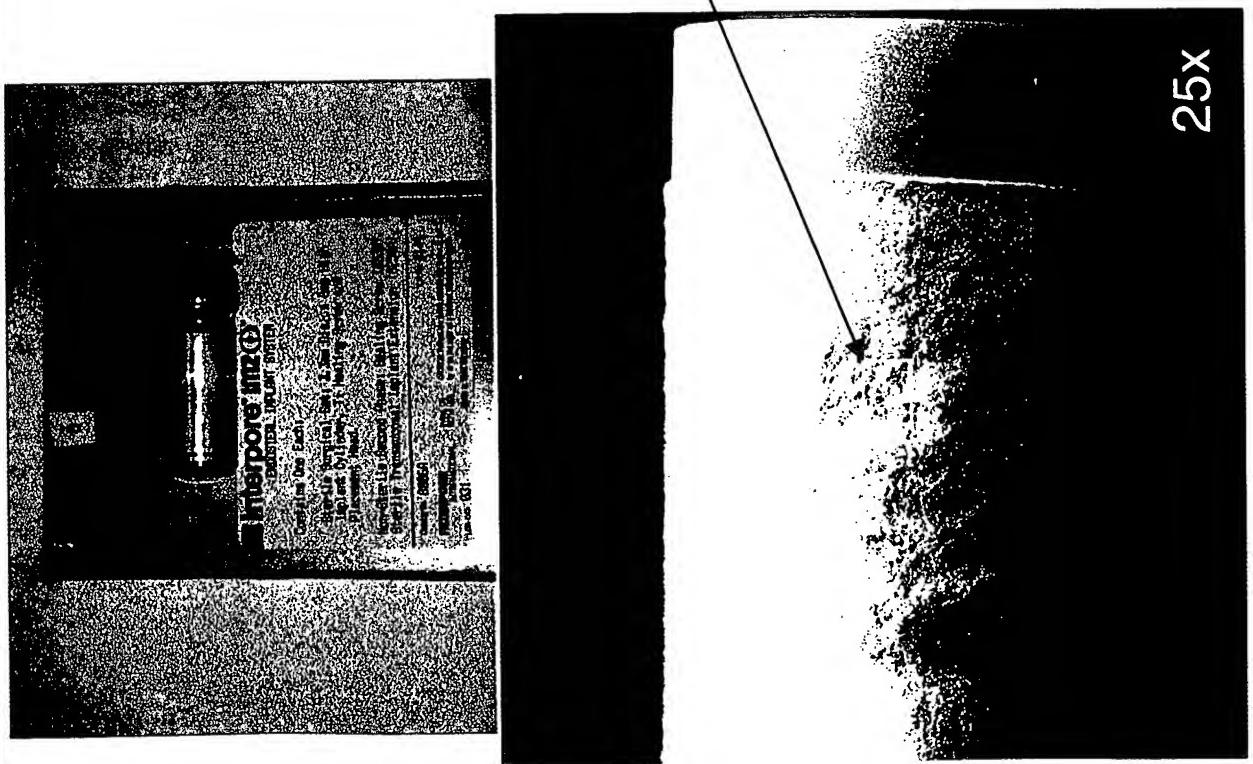
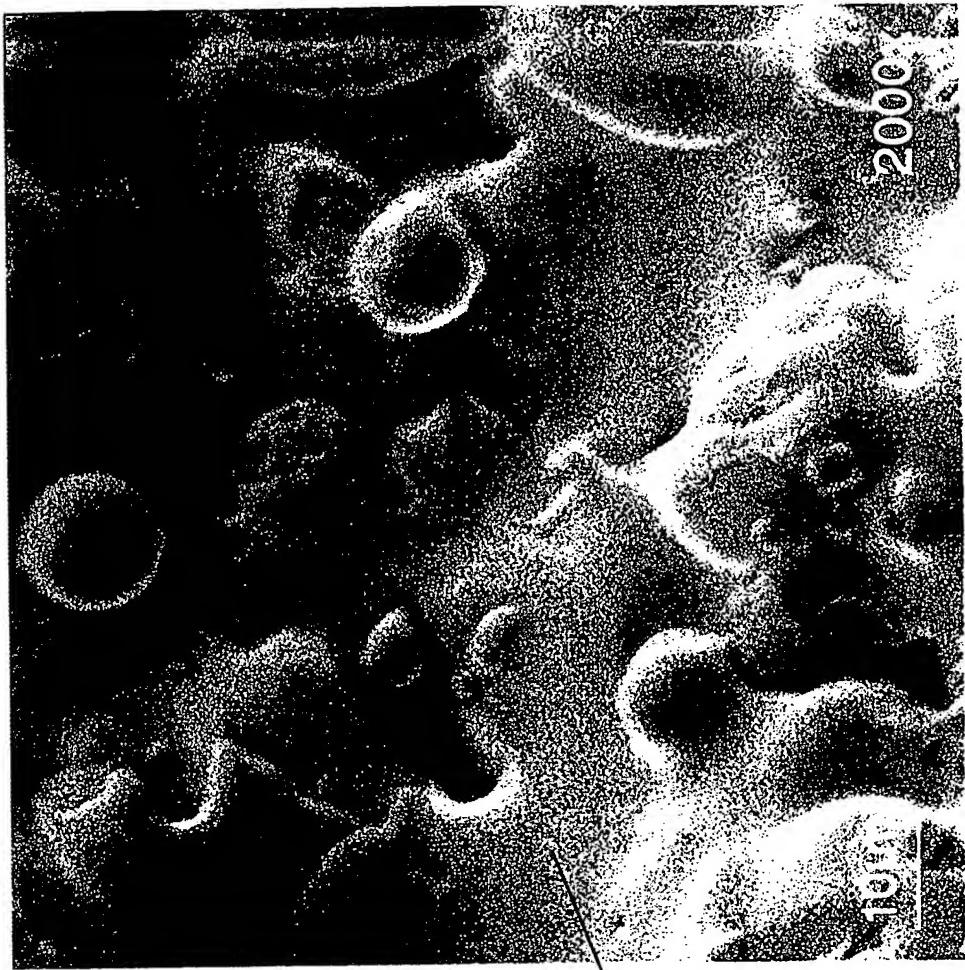
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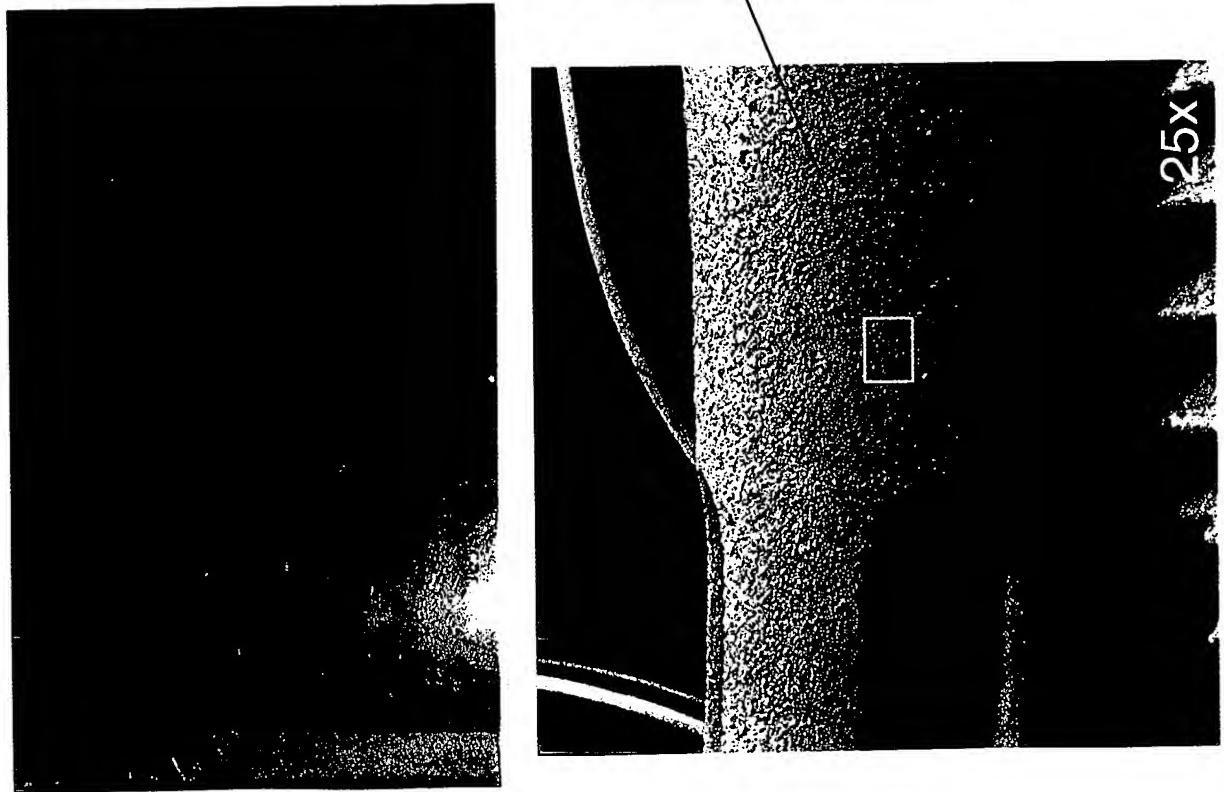
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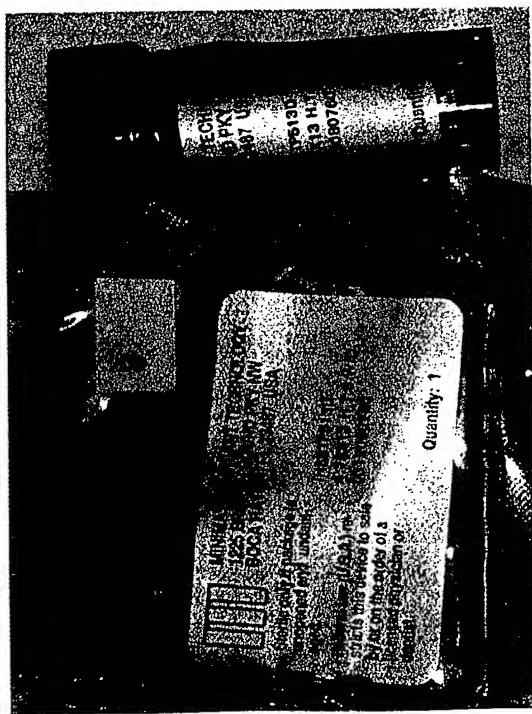
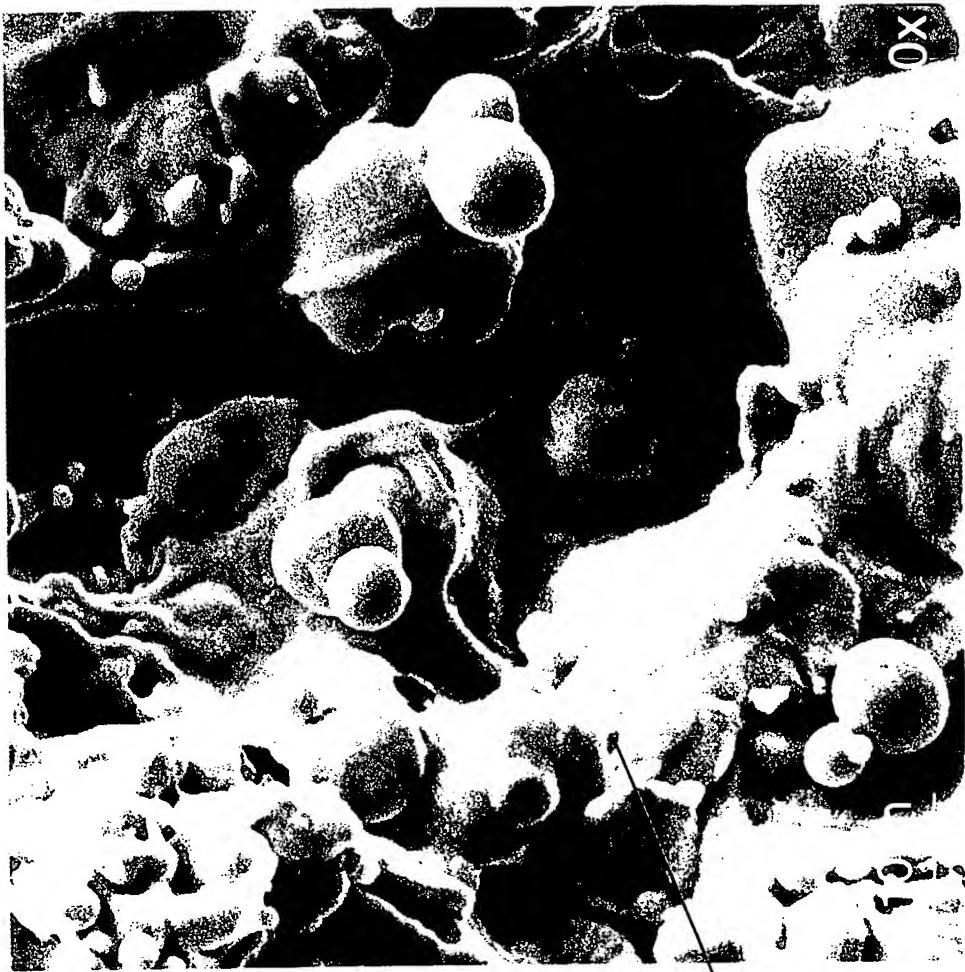
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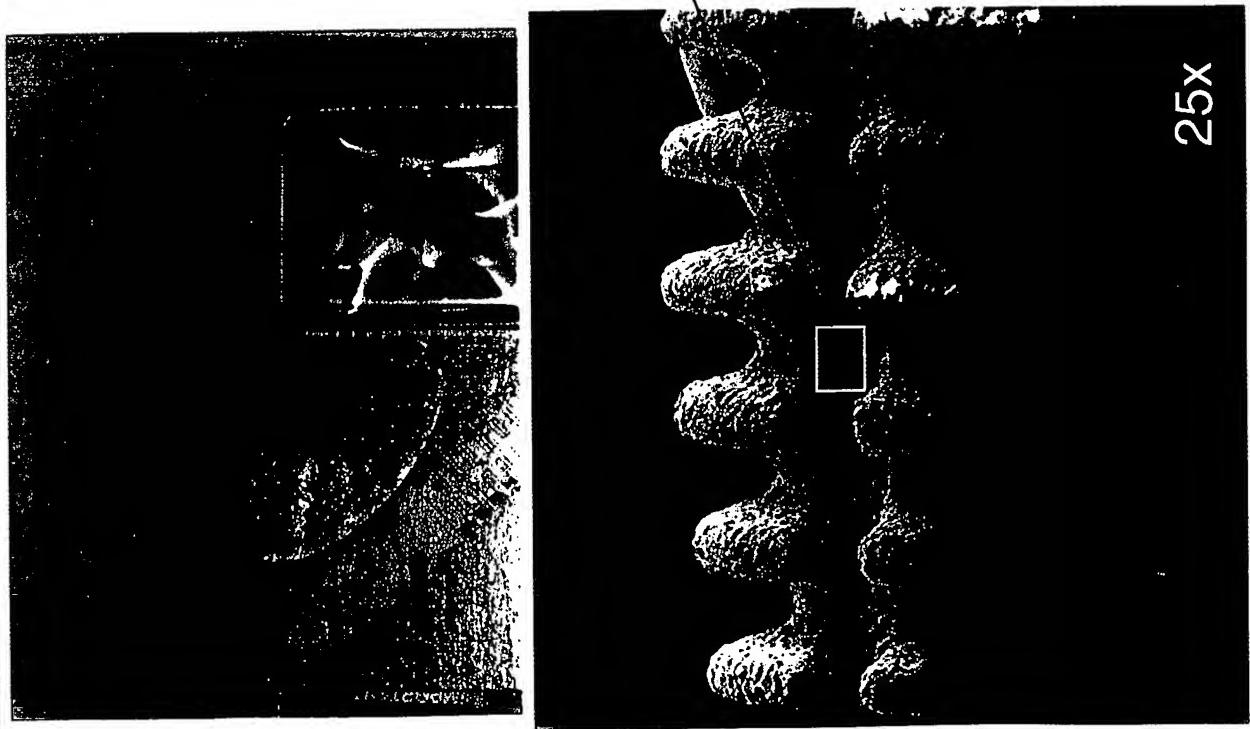
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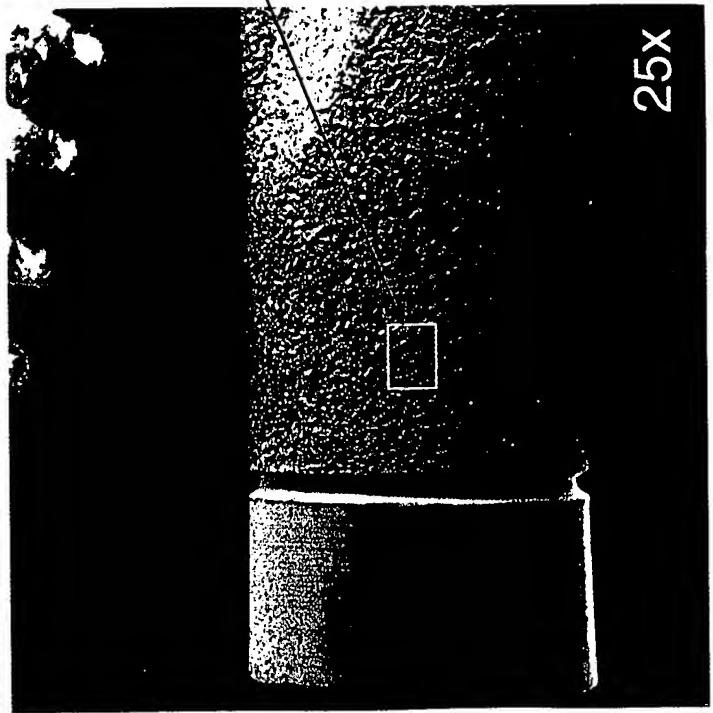
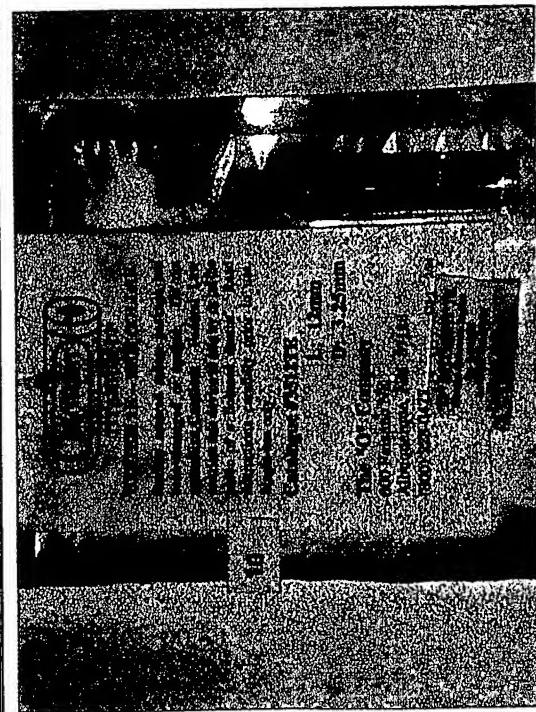
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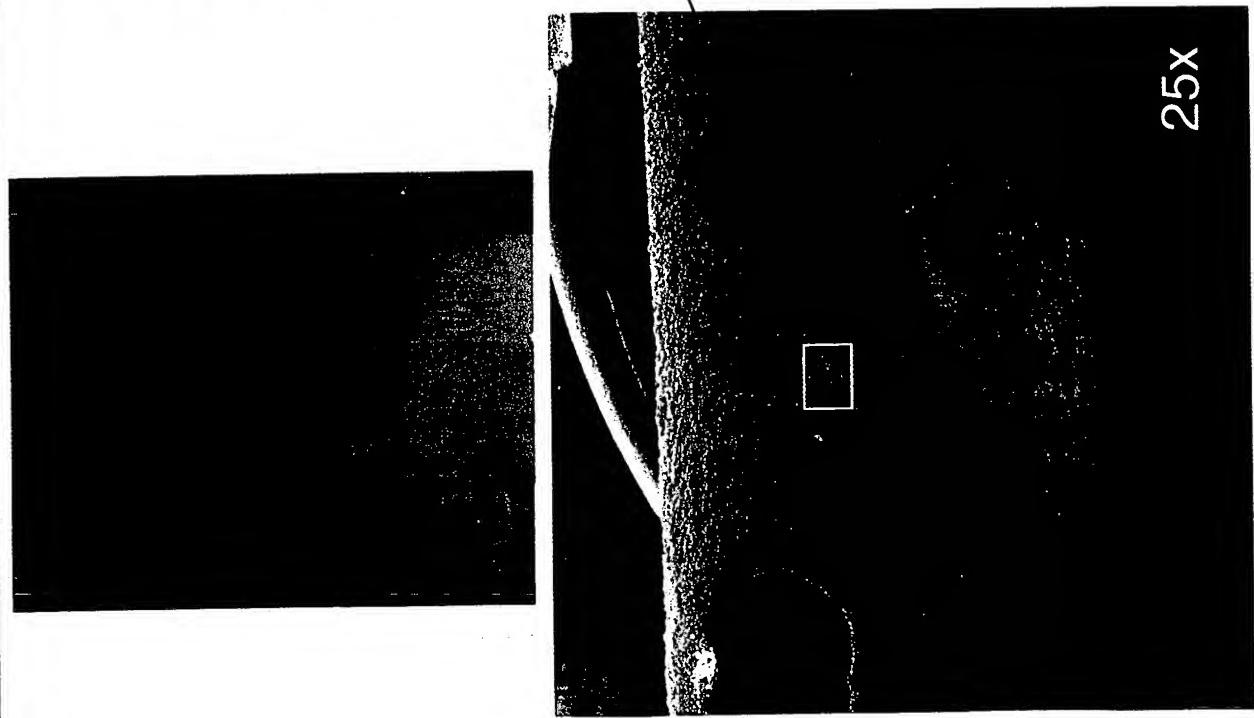
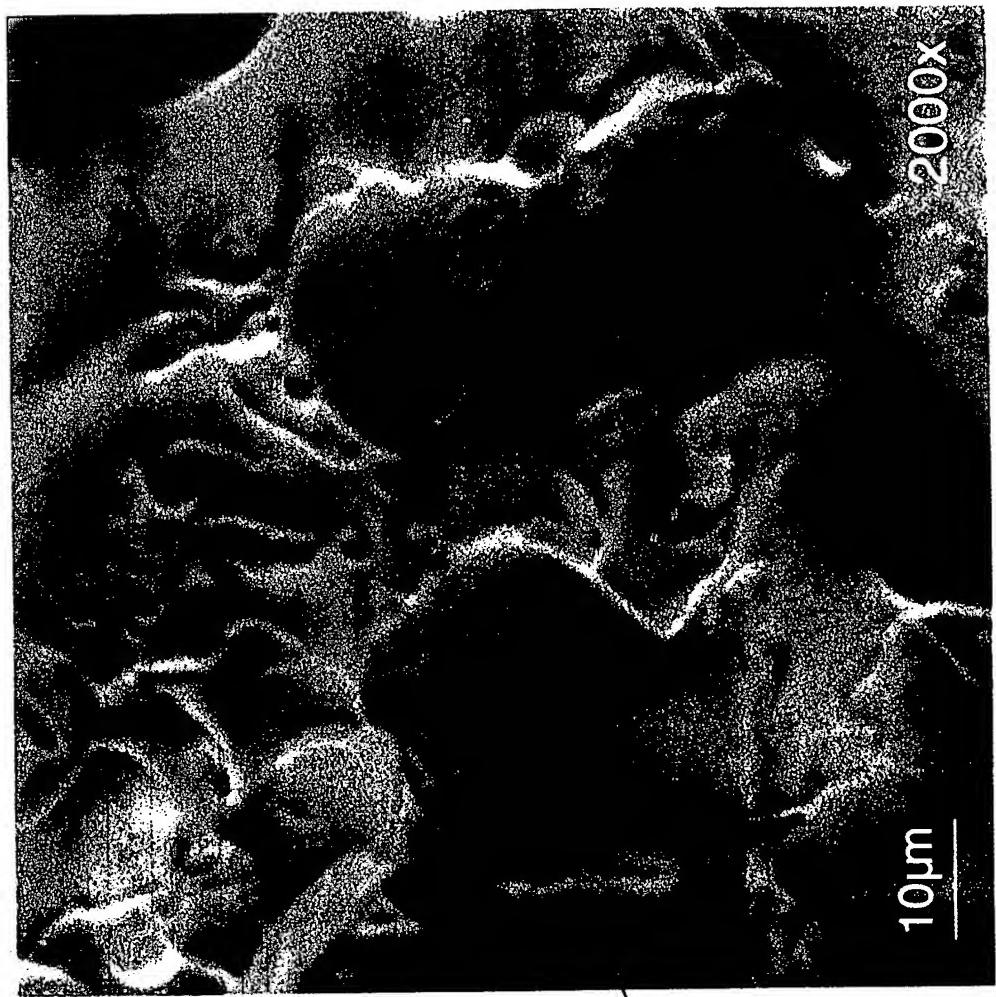
9. Stryker



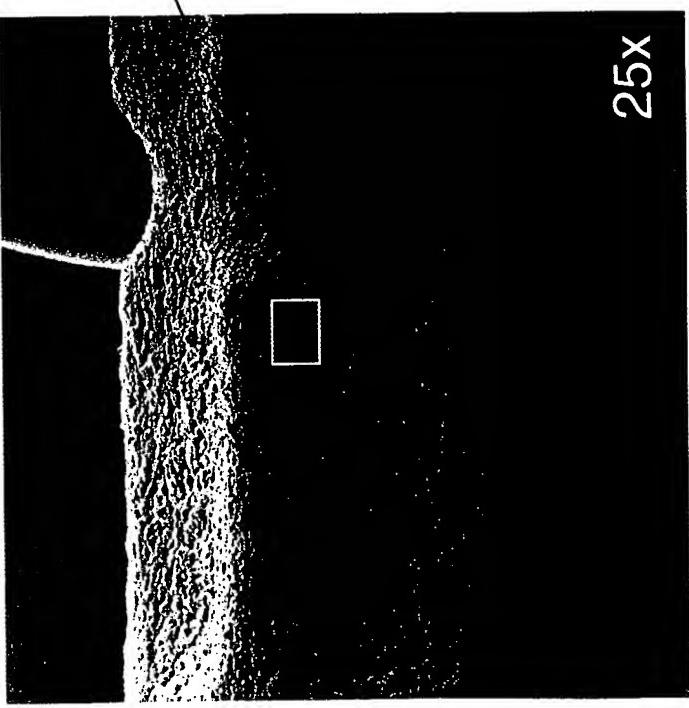
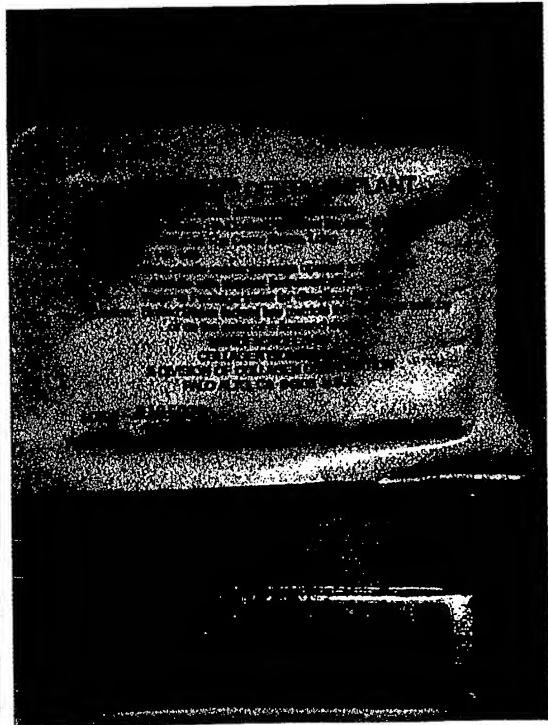
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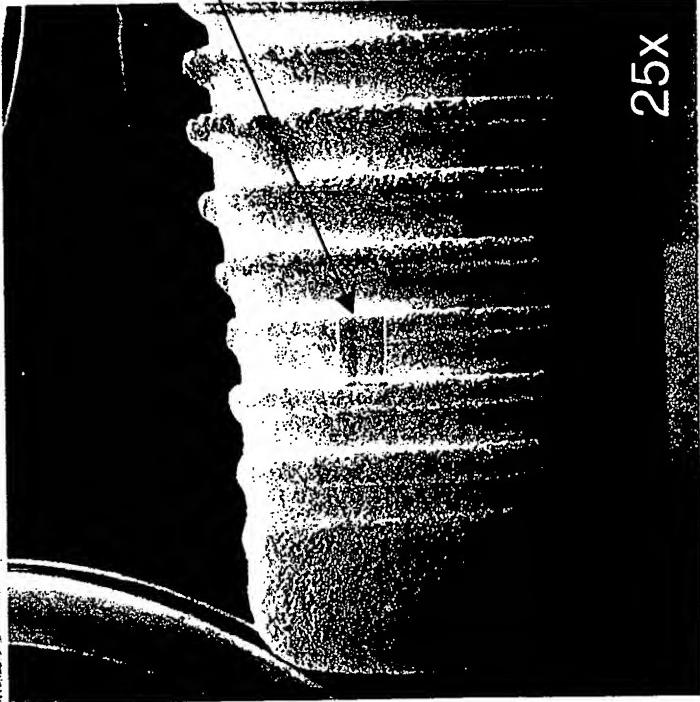
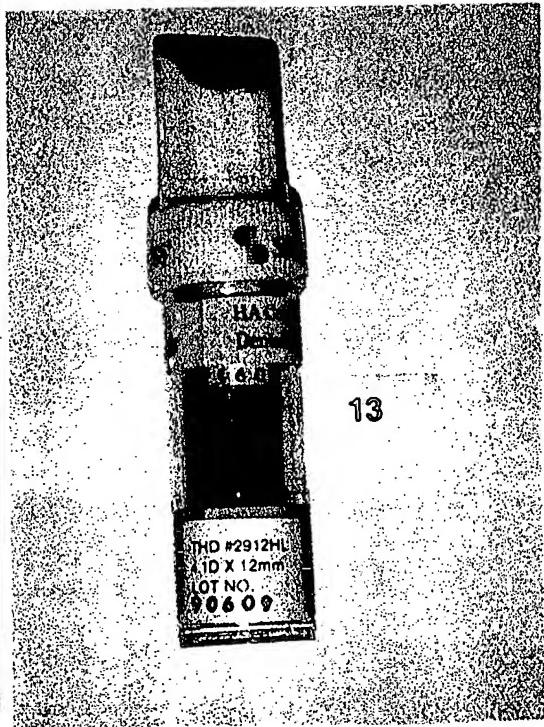
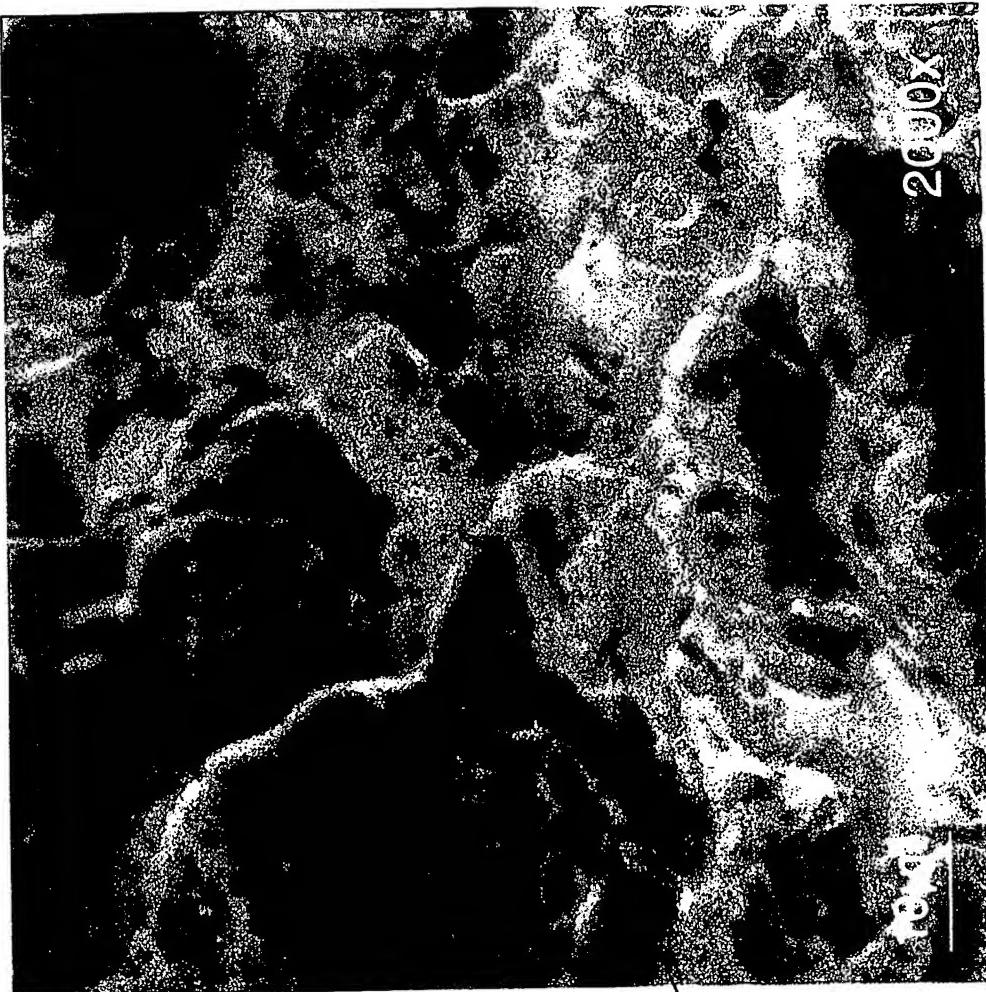
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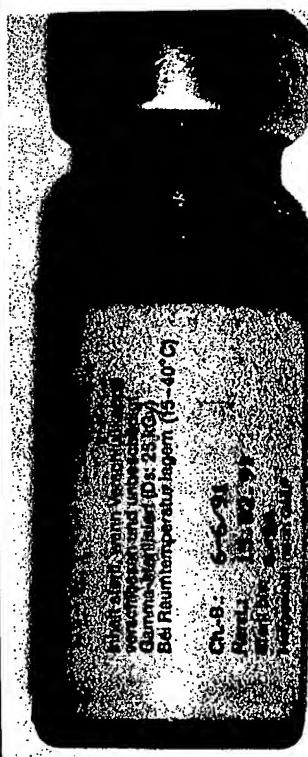
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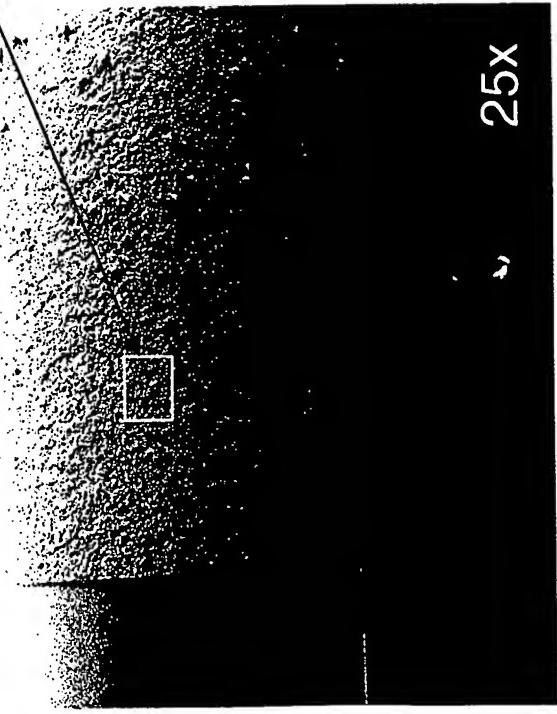
13. Steri-Oss



14. Friedrichsfeld

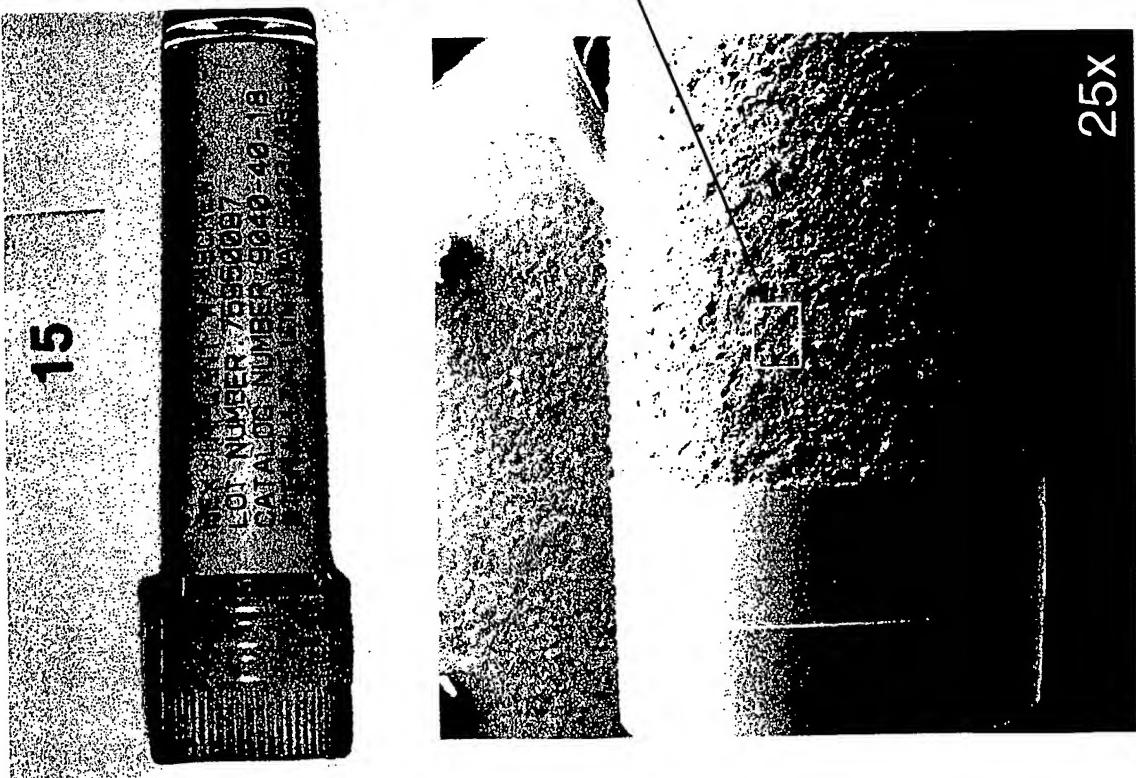
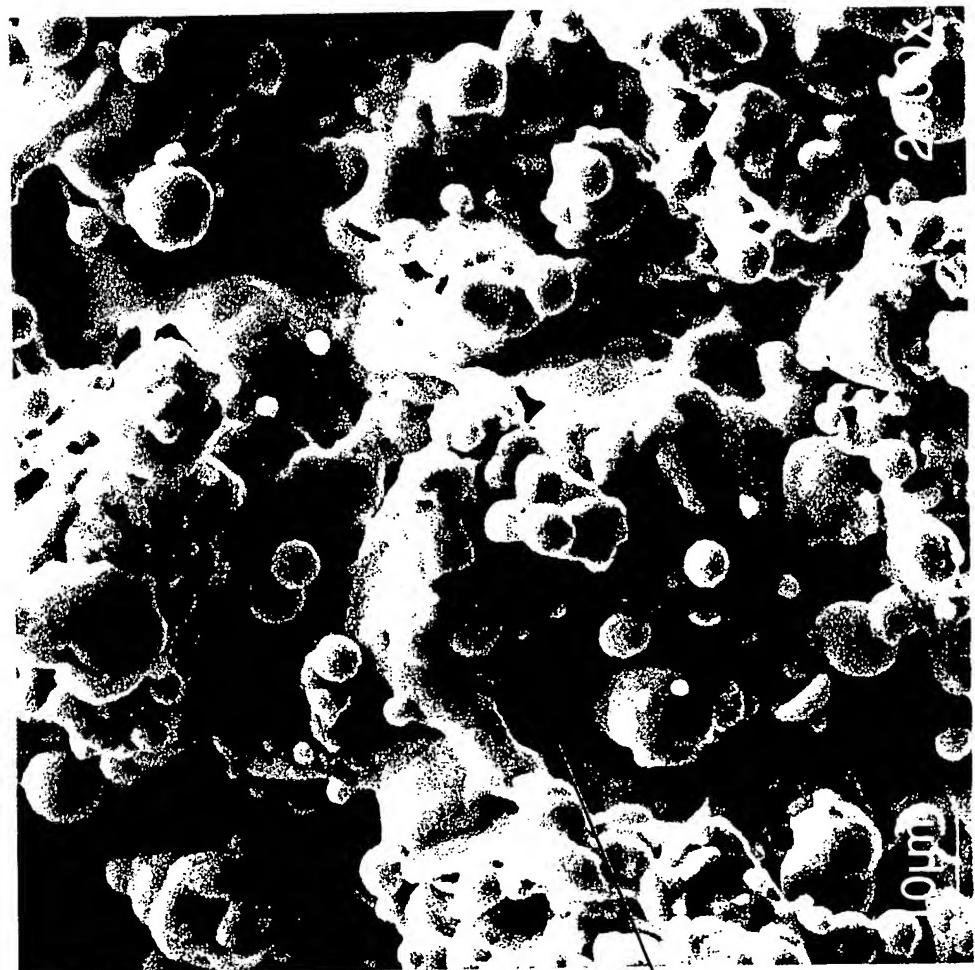


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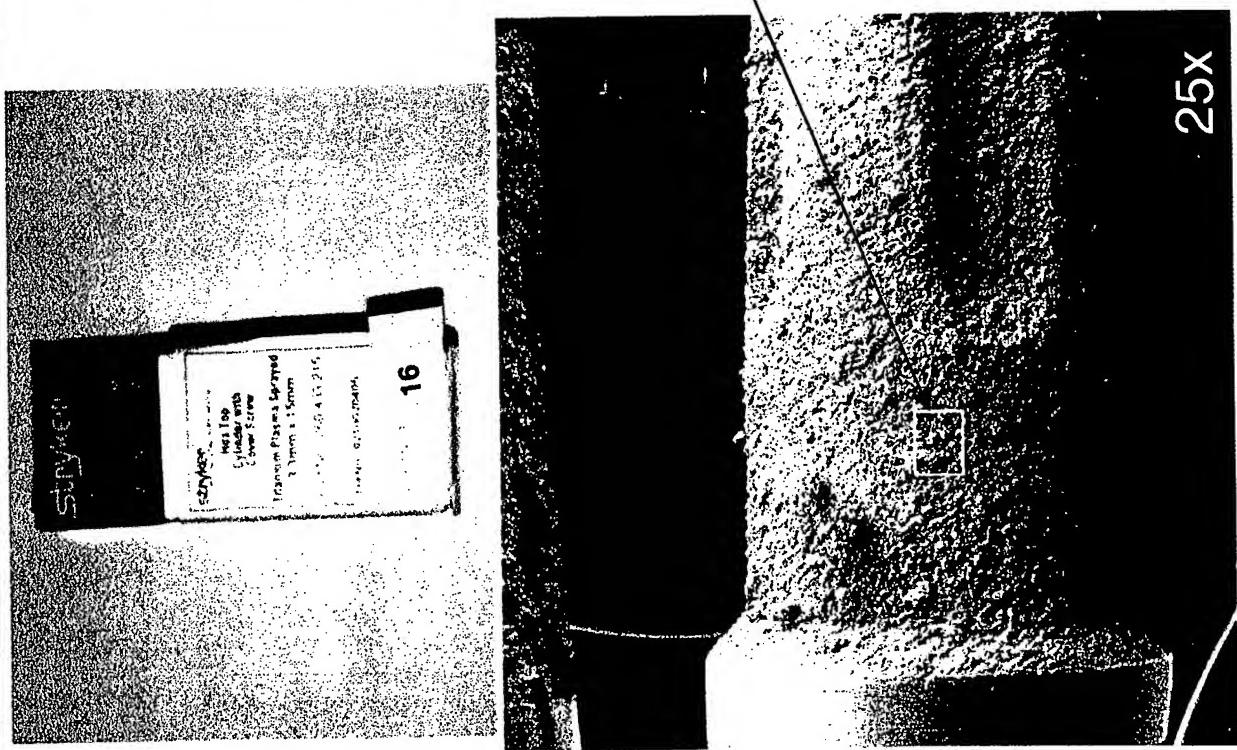
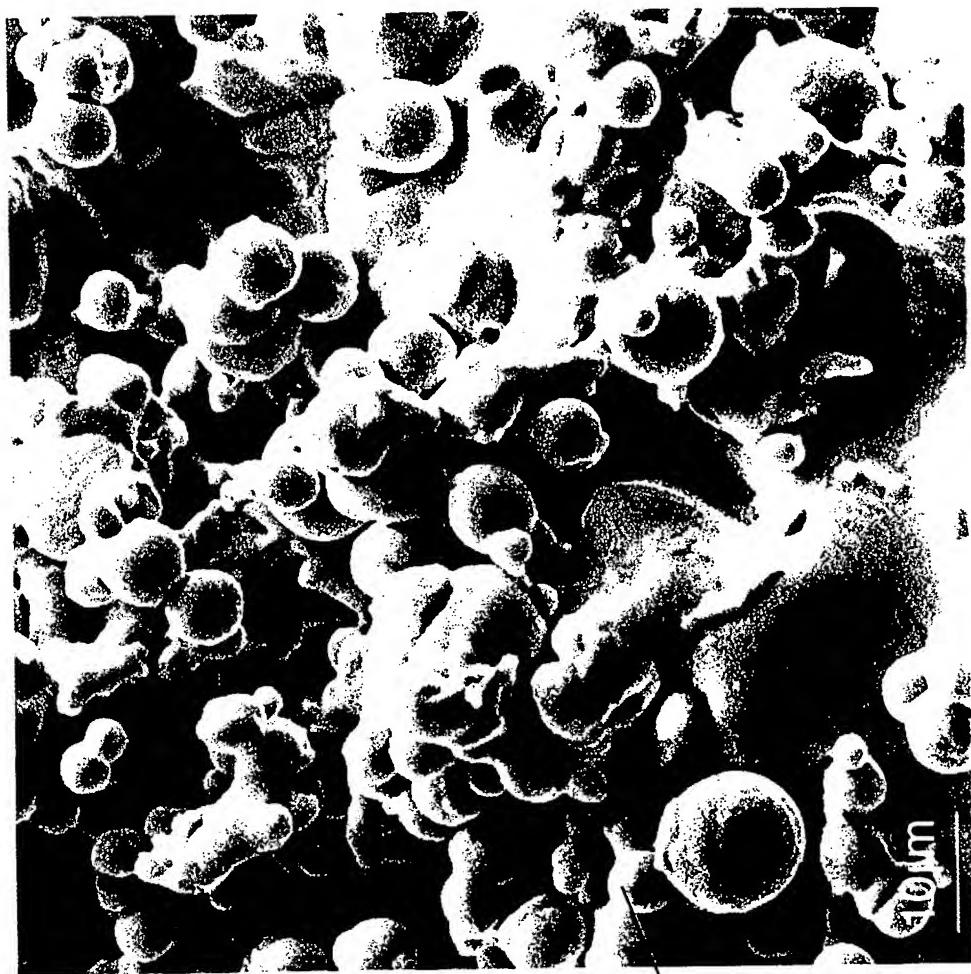


25X

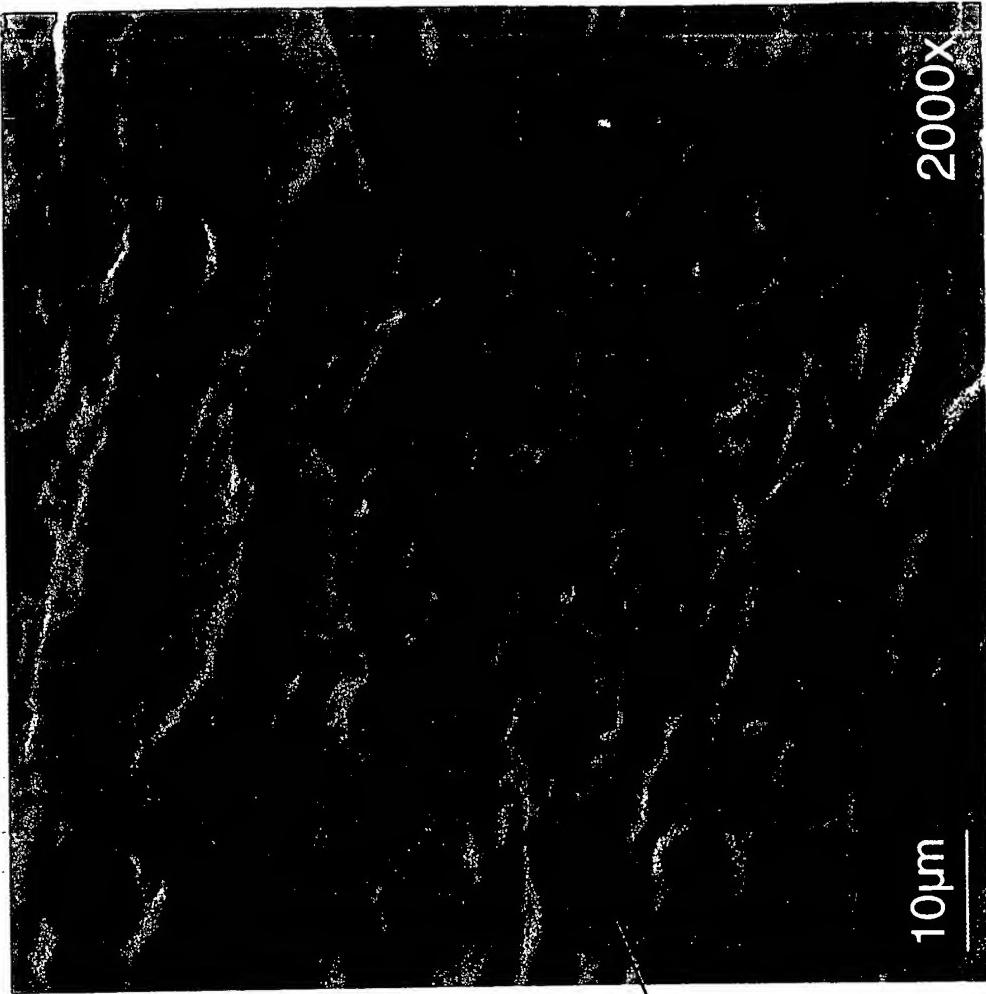
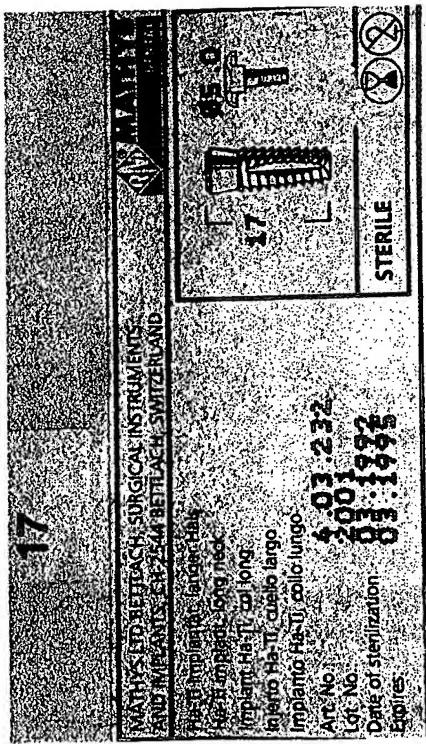
15. Lifecore Biomedical



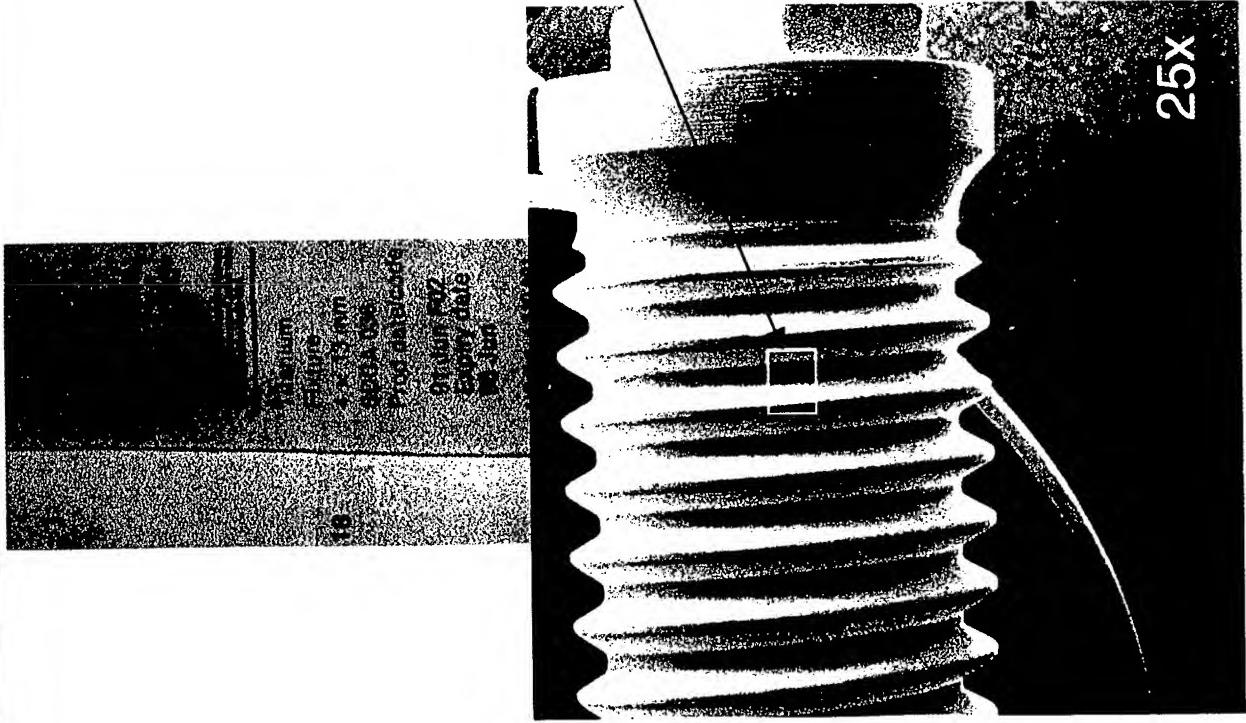
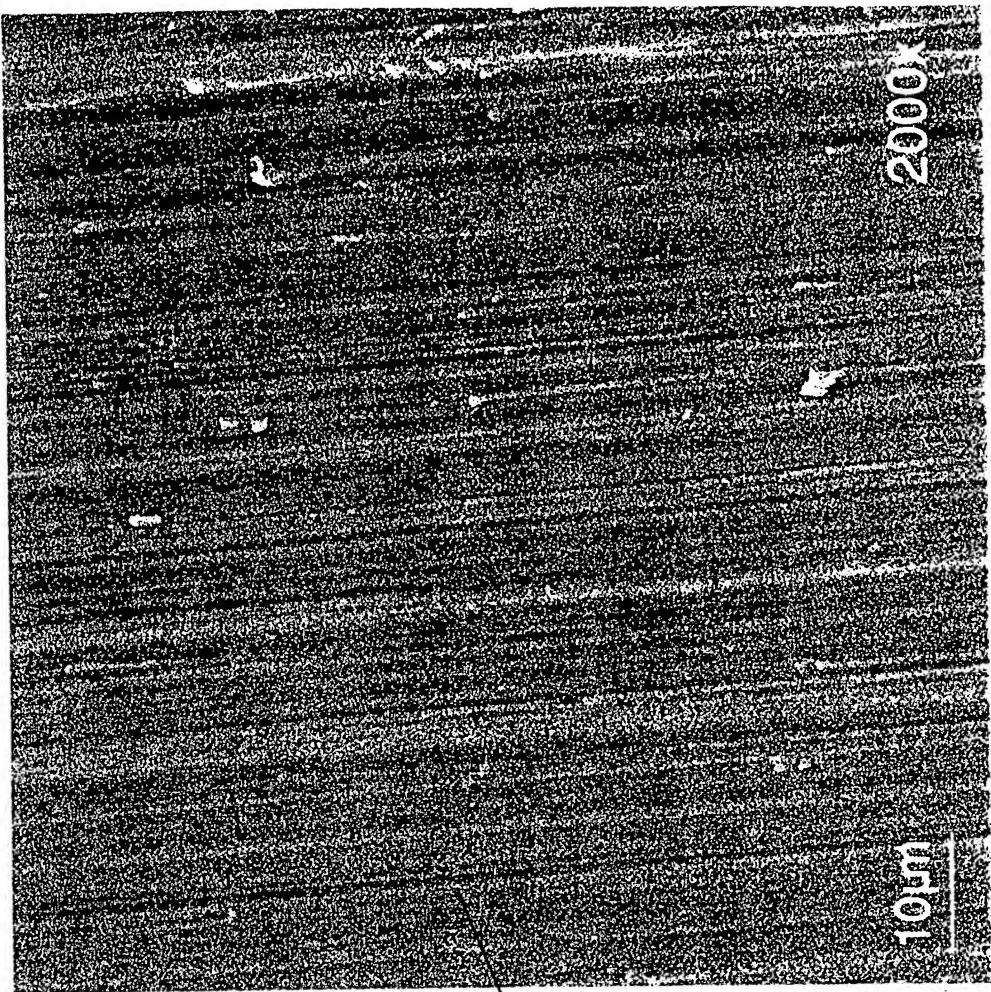
16. Stryker



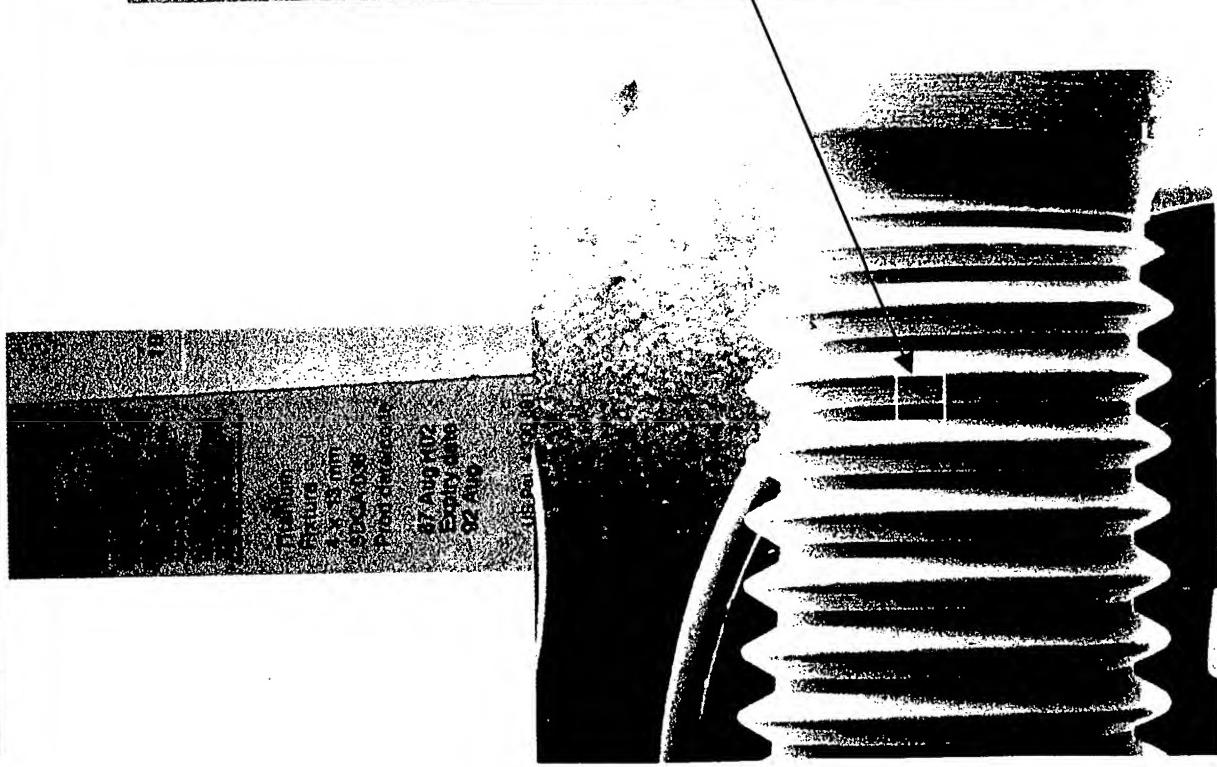
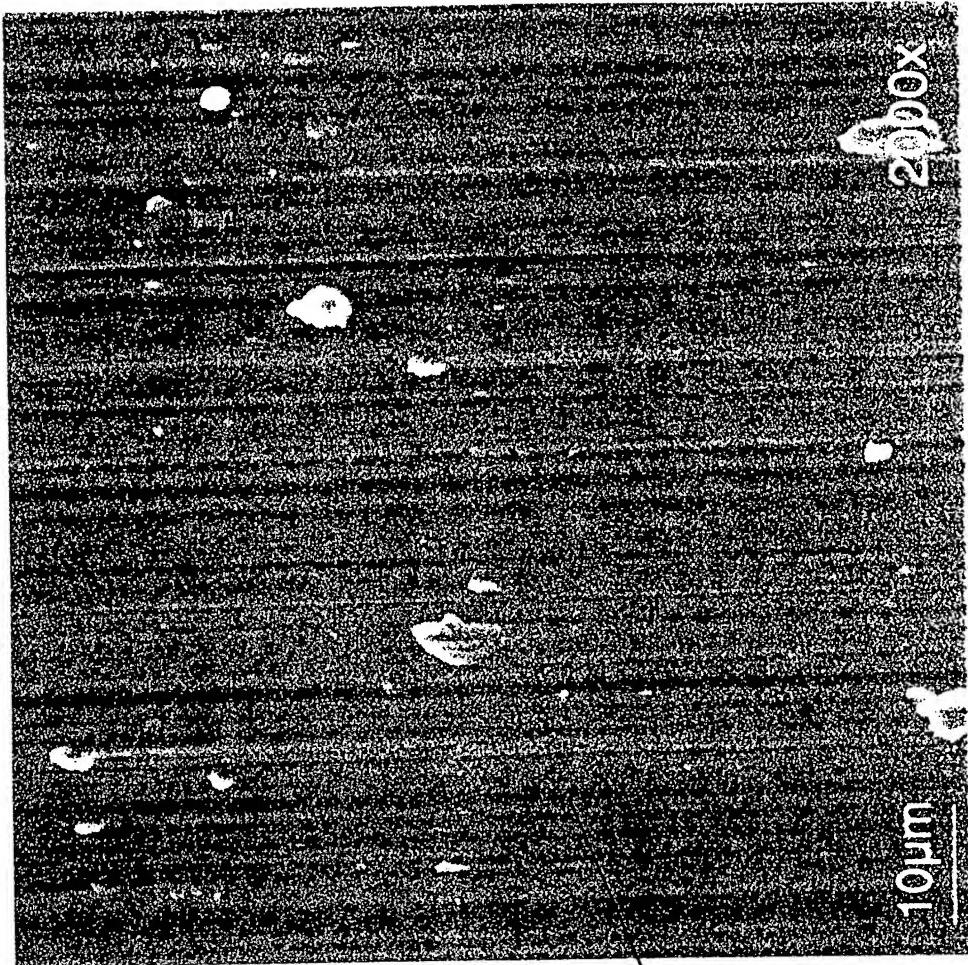
17. Mathys



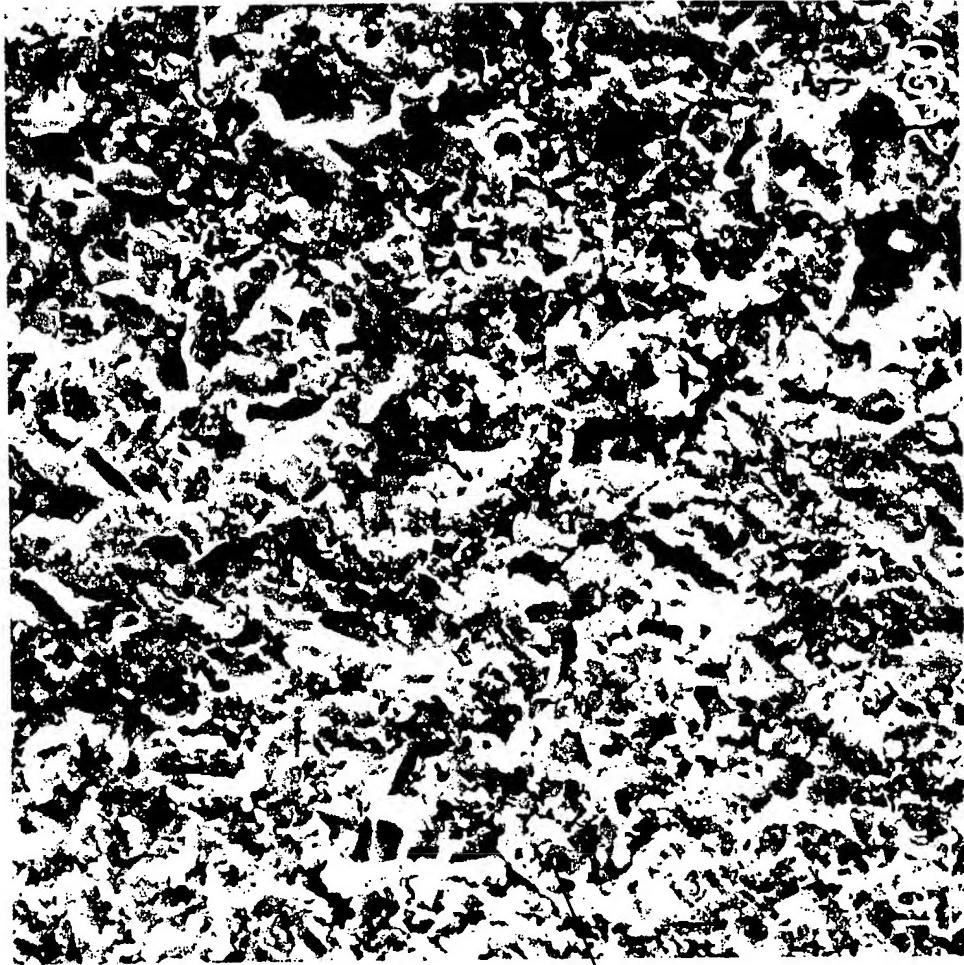
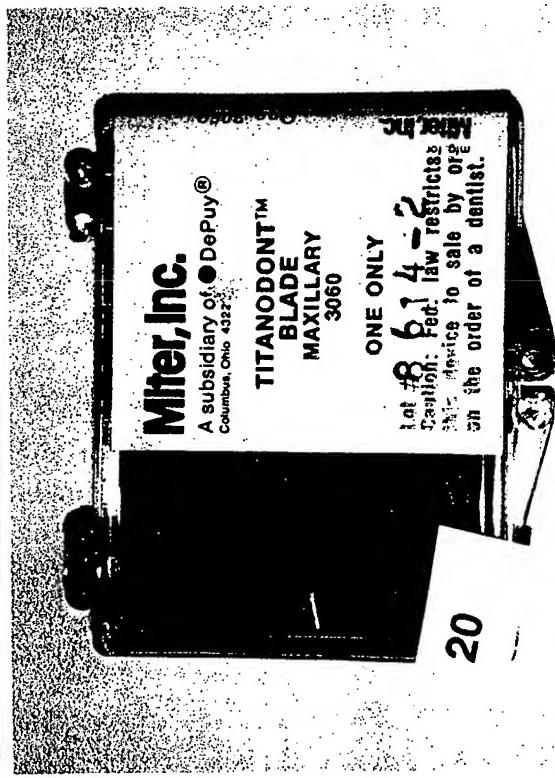
18. Nobelpharma



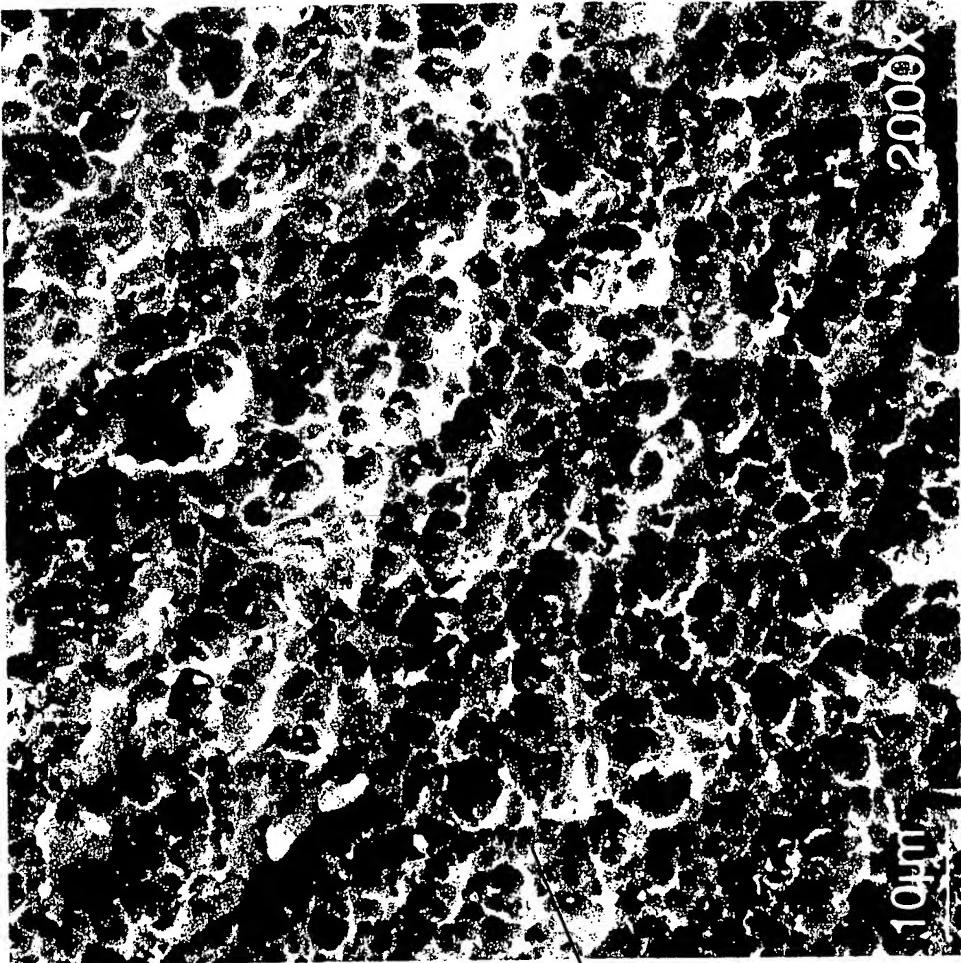
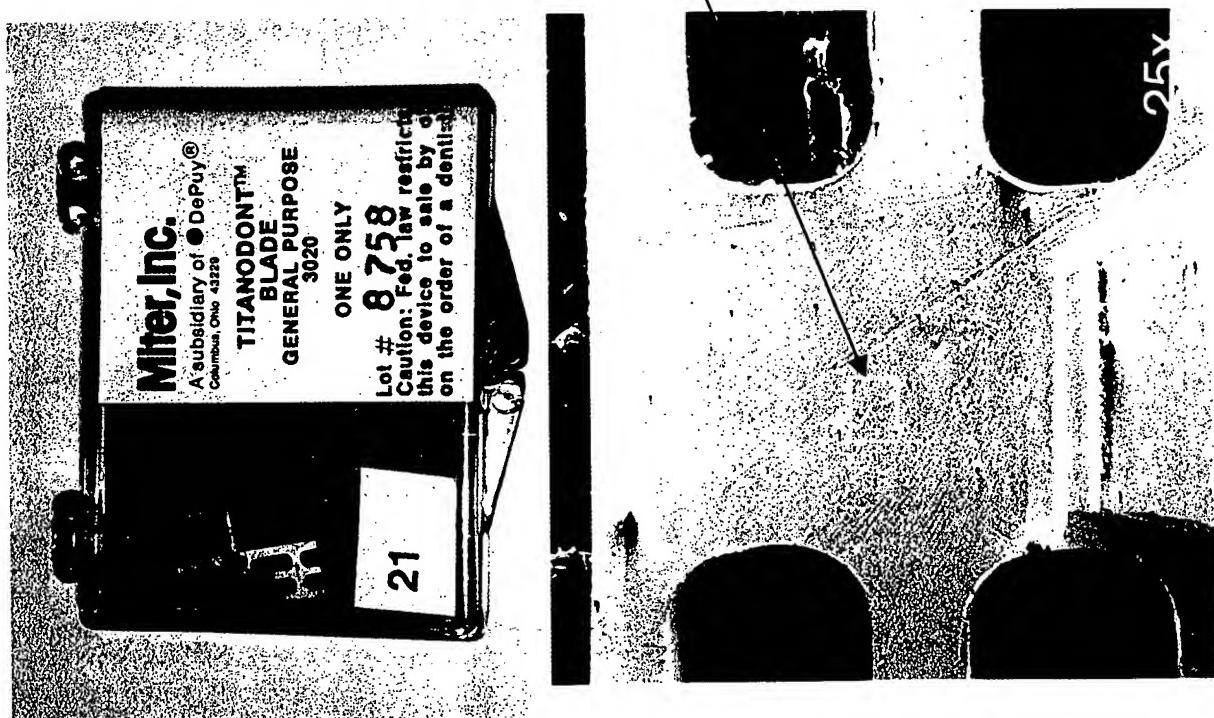
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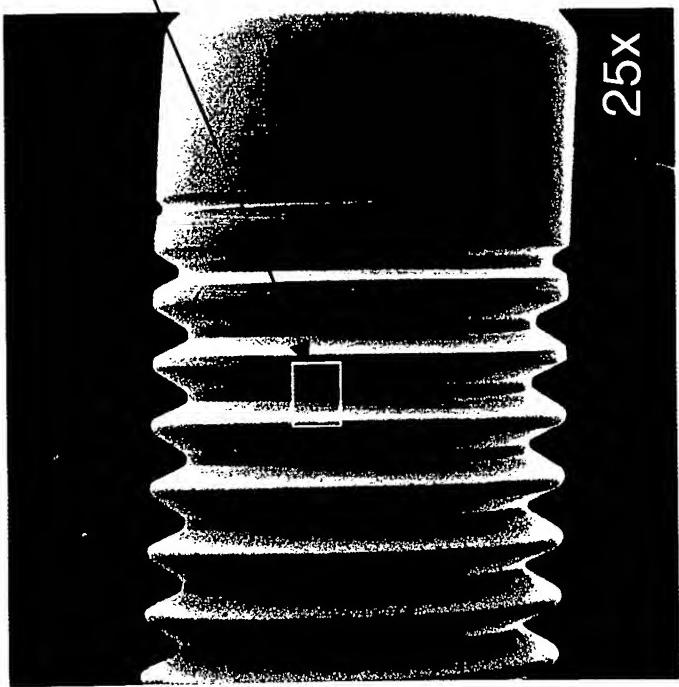
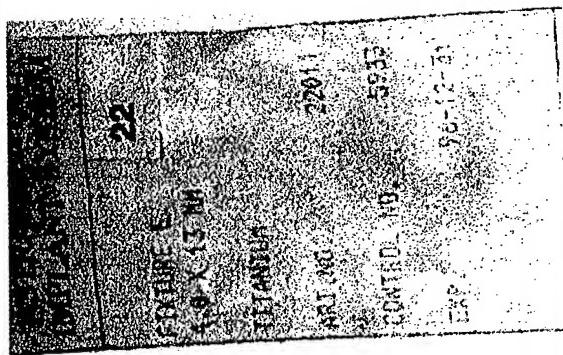
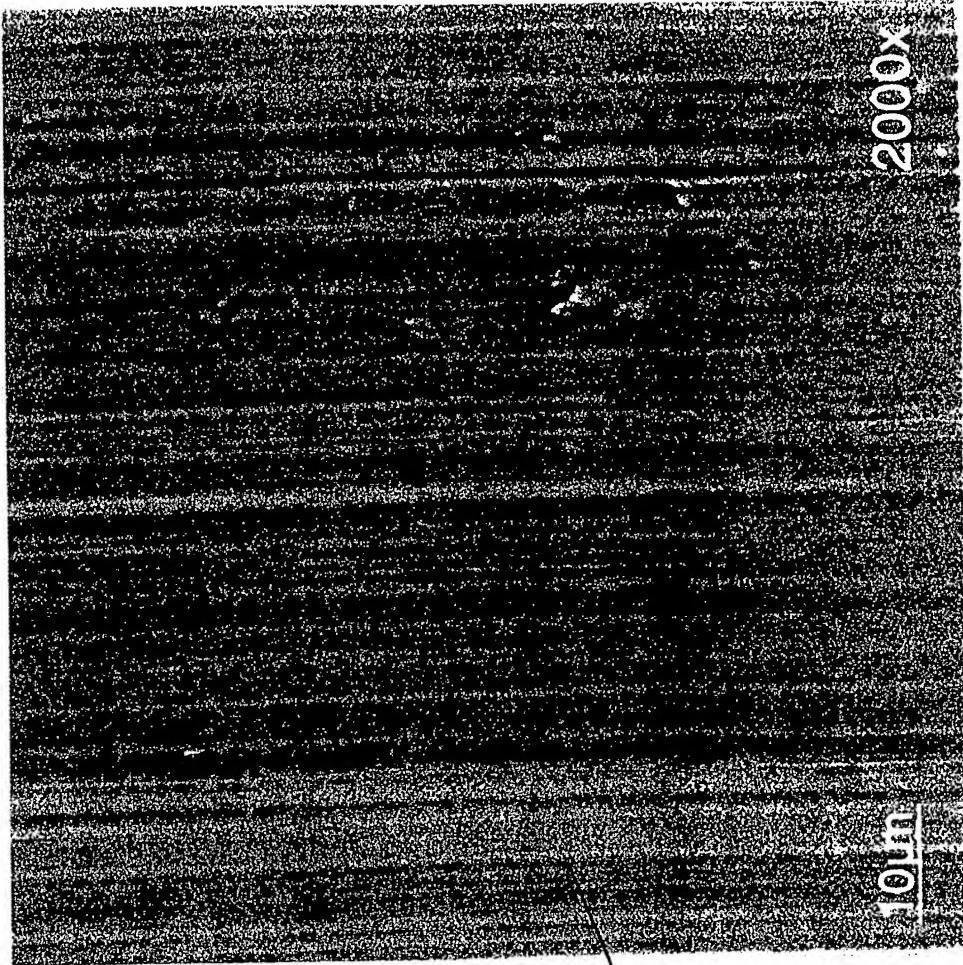
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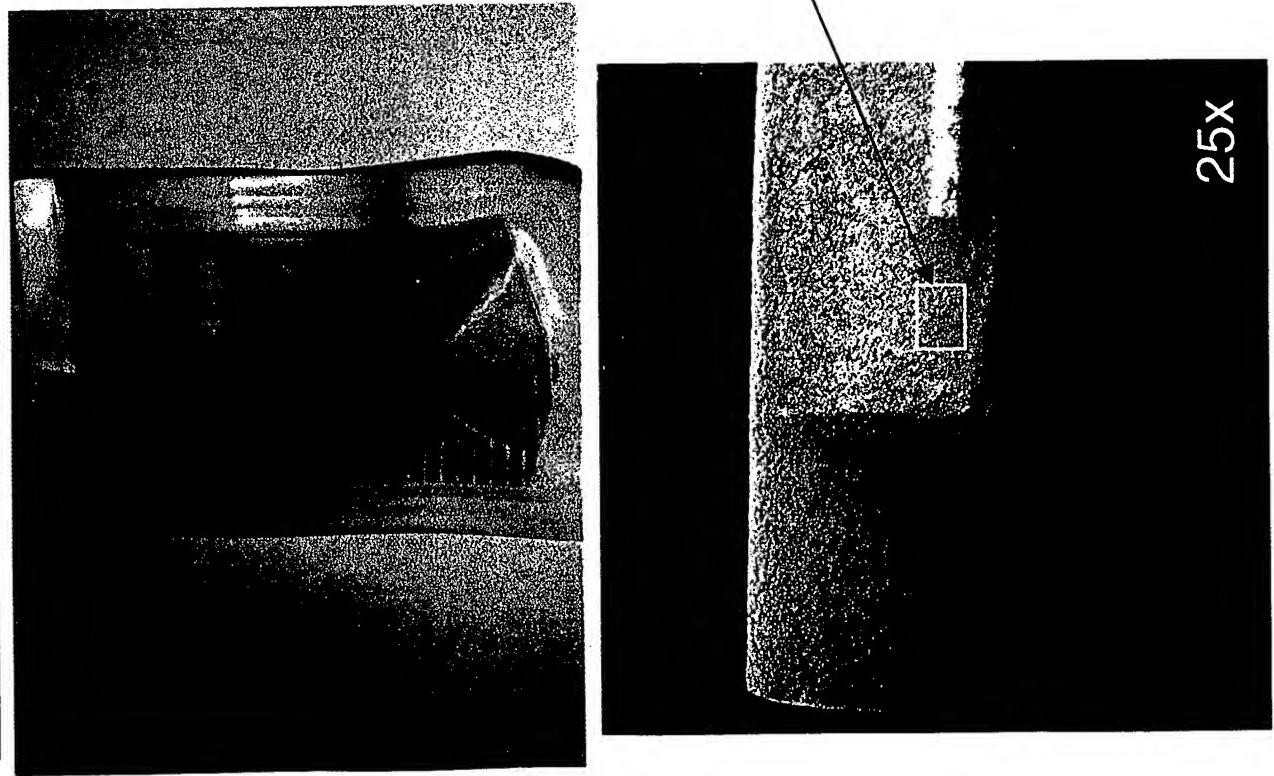
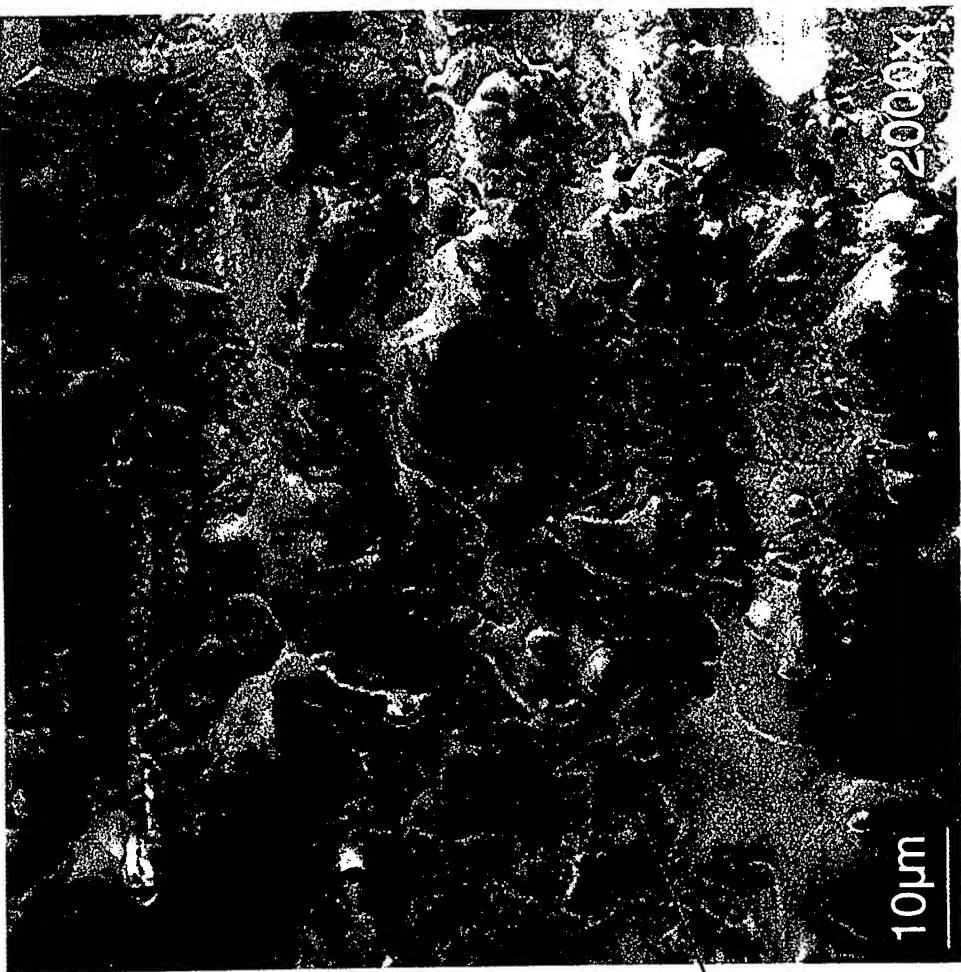
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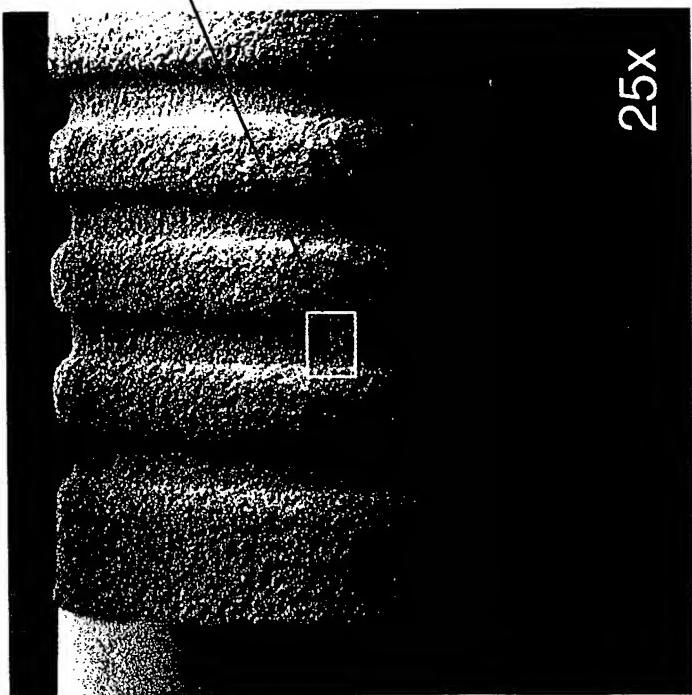
22. Astra Dental



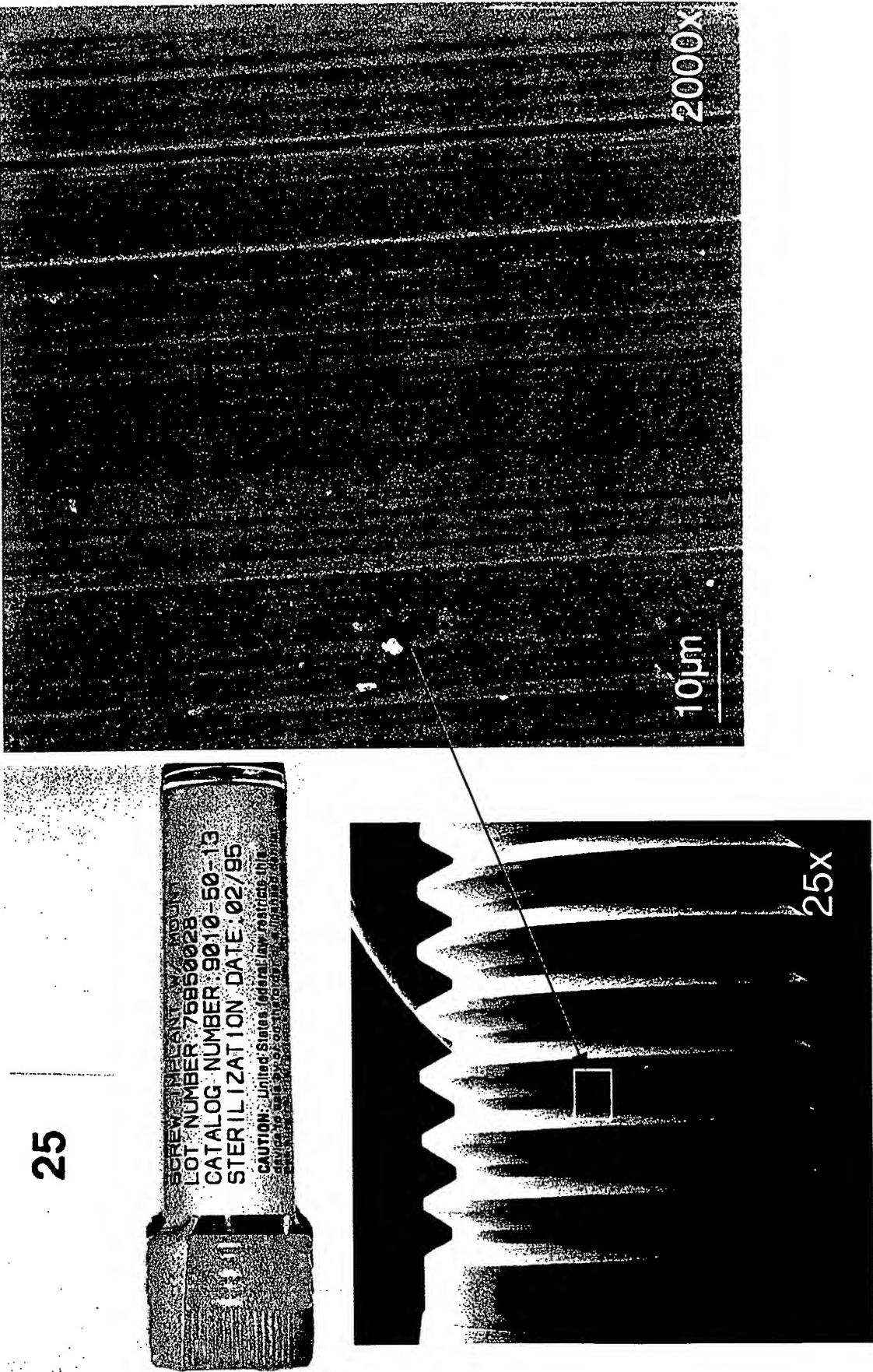
23. Calcitek



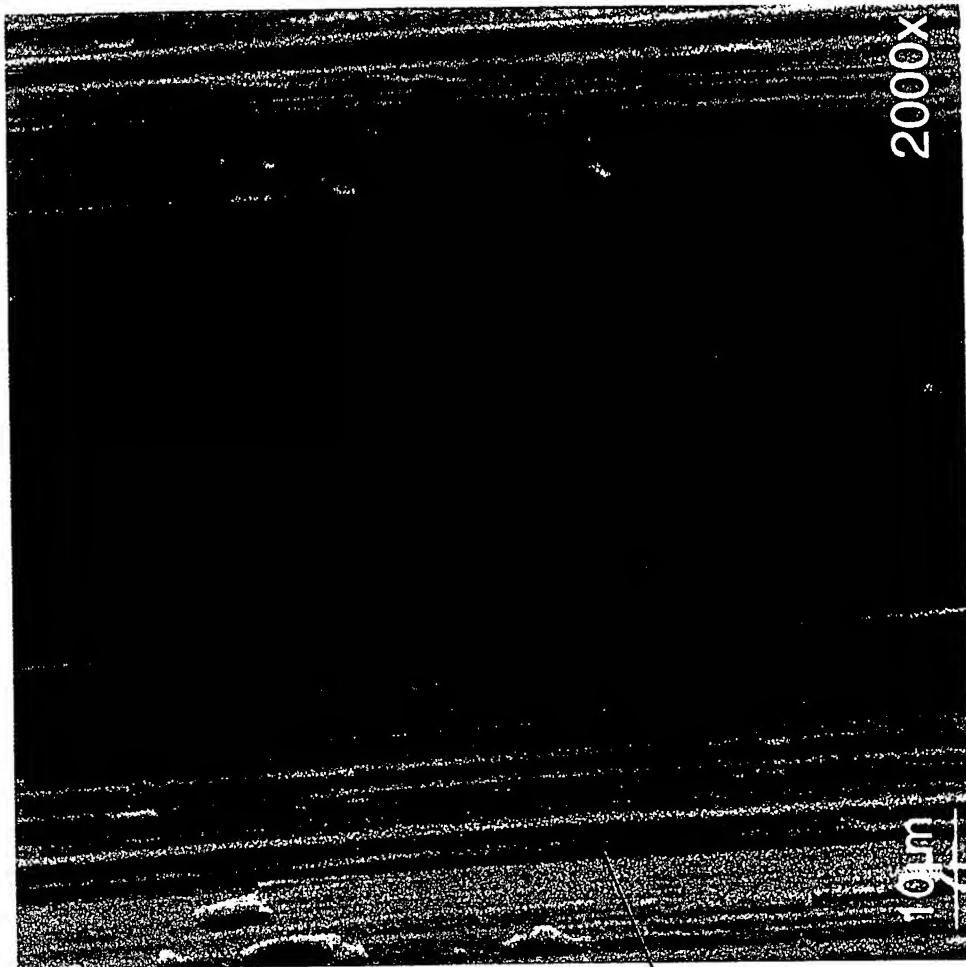
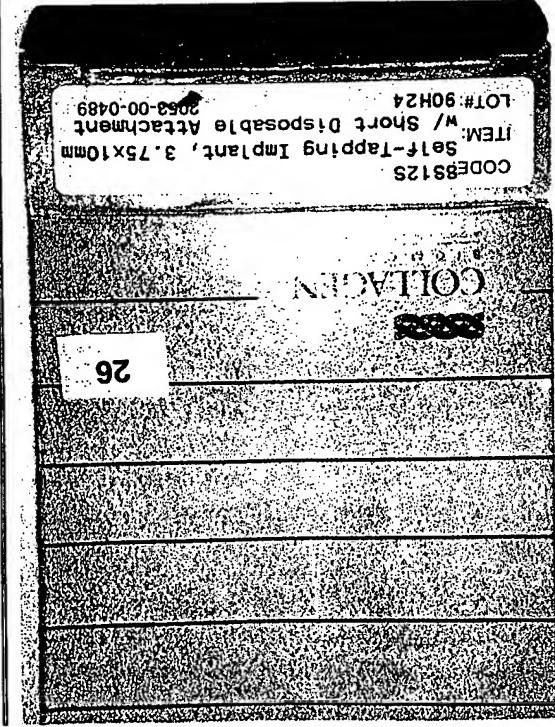
24. Lifecore Biomedical



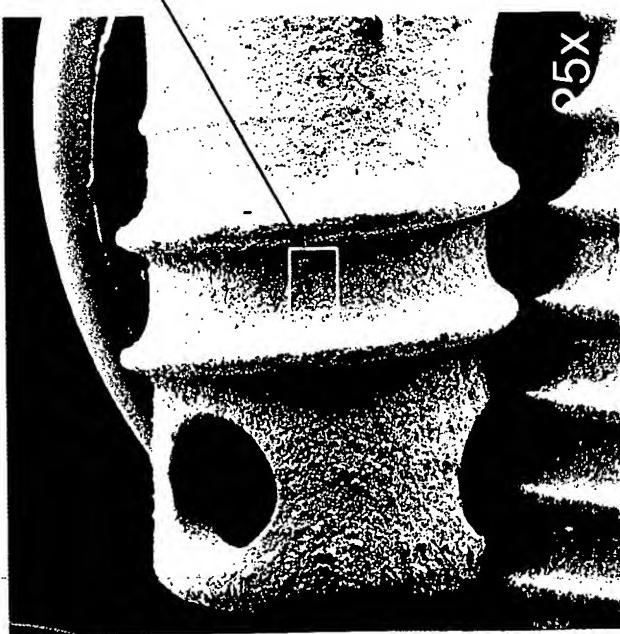
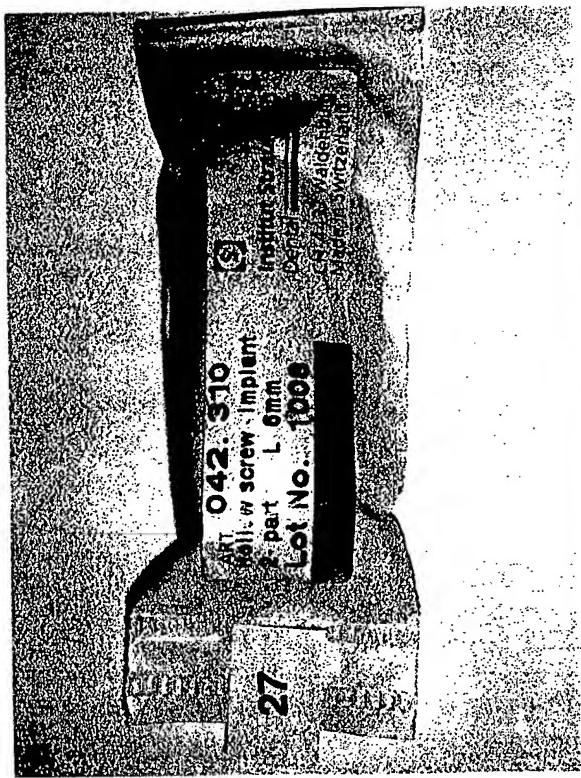
25. Lifecore Biomedical



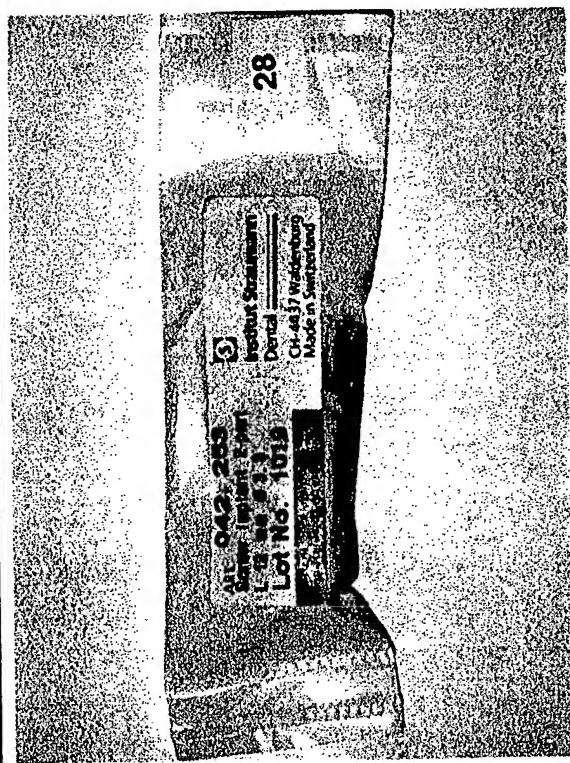
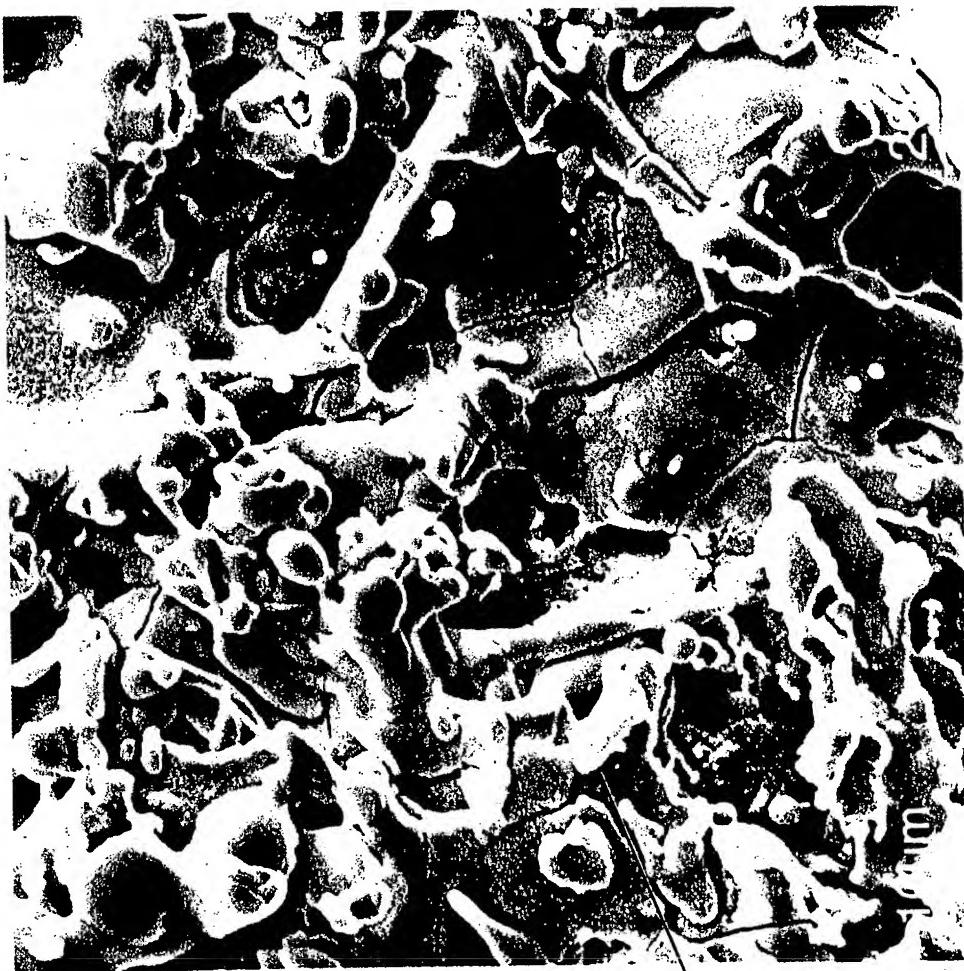
26. Collagen Biomedical



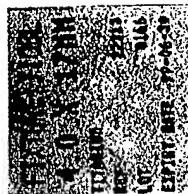
27. Institut Straumann



28. Institut Straumann



29. Astra Tech



ASTRA TECH
IMPLANTS

DENTAL SYSTEMS

STERILE Single use

10 mm / 12 mm

14 mm / 16 mm

18 mm / 20 mm

22 mm / 24 mm

26 mm / 28 mm

30 mm / 32 mm

34 mm / 36 mm

40 mm / 42 mm

46 mm / 48 mm

52 mm / 54 mm

58 mm / 60 mm

64 mm / 66 mm

70 mm / 72 mm

76 mm / 78 mm

82 mm / 84 mm

90 mm / 92 mm

98 mm / 100 mm

106 mm / 108 mm

114 mm / 116 mm

122 mm / 124 mm

130 mm / 132 mm

138 mm / 140 mm

146 mm / 148 mm

154 mm / 156 mm

162 mm / 164 mm

170 mm / 172 mm

178 mm / 180 mm

186 mm / 188 mm

194 mm / 196 mm

202 mm / 204 mm

210 mm / 212 mm

218 mm / 220 mm

226 mm / 228 mm

234 mm / 236 mm

242 mm / 244 mm

250 mm / 252 mm

258 mm / 260 mm

266 mm / 268 mm

274 mm / 276 mm

282 mm / 284 mm

290 mm / 292 mm

298 mm / 300 mm

306 mm / 308 mm

314 mm / 316 mm

322 mm / 324 mm

330 mm / 332 mm

338 mm / 340 mm

346 mm / 348 mm

354 mm / 356 mm

362 mm / 364 mm

370 mm / 372 mm

378 mm / 380 mm

386 mm / 388 mm

394 mm / 396 mm

402 mm / 404 mm

410 mm / 412 mm

418 mm / 420 mm

426 mm / 428 mm

434 mm / 436 mm

442 mm / 444 mm

450 mm / 452 mm

458 mm / 460 mm

466 mm / 468 mm

474 mm / 476 mm

482 mm / 484 mm

490 mm / 492 mm

498 mm / 500 mm

506 mm / 508 mm

514 mm / 516 mm

522 mm / 524 mm

530 mm / 532 mm

538 mm / 540 mm

546 mm / 548 mm

554 mm / 556 mm

562 mm / 564 mm

570 mm / 572 mm

578 mm / 580 mm

586 mm / 588 mm

594 mm / 596 mm

602 mm / 604 mm

610 mm / 612 mm

618 mm / 620 mm

626 mm / 628 mm

634 mm / 636 mm

642 mm / 644 mm

650 mm / 652 mm

658 mm / 660 mm

666 mm / 668 mm

674 mm / 676 mm

682 mm / 684 mm

690 mm / 692 mm

698 mm / 700 mm

706 mm / 708 mm

714 mm / 716 mm

722 mm / 724 mm

730 mm / 732 mm

738 mm / 740 mm

746 mm / 748 mm

754 mm / 756 mm

762 mm / 764 mm

770 mm / 772 mm

778 mm / 780 mm

786 mm / 788 mm

794 mm / 796 mm

802 mm / 804 mm

810 mm / 812 mm

818 mm / 820 mm

826 mm / 828 mm

834 mm / 836 mm

842 mm / 844 mm

850 mm / 852 mm

858 mm / 860 mm

866 mm / 868 mm

874 mm / 876 mm

882 mm / 884 mm

890 mm / 892 mm

898 mm / 900 mm

906 mm / 908 mm

914 mm / 916 mm

922 mm / 924 mm

930 mm / 932 mm

938 mm / 940 mm

946 mm / 948 mm

954 mm / 956 mm

962 mm / 964 mm

970 mm / 972 mm

978 mm / 980 mm

986 mm / 988 mm

994 mm / 996 mm

1002 mm / 1004 mm

1010 mm / 1012 mm

1018 mm / 1020 mm

1026 mm / 1028 mm

1034 mm / 1036 mm

1042 mm / 1044 mm

1050 mm / 1052 mm

1058 mm / 1060 mm

1066 mm / 1068 mm

1074 mm / 1076 mm

1082 mm / 1084 mm

1090 mm / 1092 mm

1098 mm / 1100 mm

1106 mm / 1108 mm

1114 mm / 1116 mm

1122 mm / 1124 mm

1130 mm / 1132 mm

1138 mm / 1140 mm

1146 mm / 1148 mm

1154 mm / 1156 mm

1162 mm / 1164 mm

1170 mm / 1172 mm

1178 mm / 1180 mm

1186 mm / 1188 mm

1194 mm / 1196 mm

1202 mm / 1204 mm

1210 mm / 1212 mm

1218 mm / 1220 mm

1226 mm / 1228 mm

1234 mm / 1236 mm

1242 mm / 1244 mm

1250 mm / 1252 mm

1258 mm / 1260 mm

1266 mm / 1268 mm

1274 mm / 1276 mm

1282 mm / 1284 mm

1290 mm / 1292 mm

1298 mm / 1300 mm

1306 mm / 1308 mm

1314 mm / 1316 mm

1322 mm / 1324 mm

1330 mm / 1332 mm

1338 mm / 1340 mm

1346 mm / 1348 mm

1354 mm / 1356 mm

1362 mm / 1364 mm

1370 mm / 1372 mm

1378 mm / 1380 mm

1386 mm / 1388 mm

1394 mm / 1396 mm

1402 mm / 1404 mm

1410 mm / 1412 mm

1418 mm / 1420 mm

1426 mm / 1428 mm

1434 mm / 1436 mm

1442 mm / 1444 mm

1450 mm / 1452 mm

1458 mm / 1460 mm

1466 mm / 1468 mm

1474 mm / 1476 mm

1482 mm / 1484 mm

1490 mm / 1492 mm

1498 mm / 1500 mm

1506 mm / 1508 mm

1514 mm / 1516 mm

1522 mm / 1524 mm

1530 mm / 1532 mm

1538 mm / 1540 mm

1546 mm / 1548 mm

1554 mm / 1556 mm

1562 mm / 1564 mm

1570 mm / 1572 mm

1578 mm / 1580 mm

1586 mm / 1588 mm

1594 mm / 1596 mm

1602 mm / 1604 mm

1610 mm / 1612 mm

1618 mm / 1620 mm

1626 mm / 1628 mm

1634 mm / 1636 mm

1642 mm / 1644 mm

1650 mm / 1652 mm

1658 mm / 1660 mm

1666 mm / 1668 mm

1674 mm / 1676 mm

1682 mm / 1684 mm

1690 mm / 1692 mm

1698 mm / 1700 mm

1706 mm / 1708 mm

1714 mm / 1716 mm

1722 mm / 1724 mm

1730 mm / 1732 mm

1738 mm / 1740 mm

1746 mm / 1748 mm

1754 mm / 1756 mm

1762 mm / 1764 mm

1770 mm / 1772 mm

1778 mm / 1780 mm

1786 mm / 1788 mm

1794 mm / 1796 mm

1802 mm / 1804 mm

1810 mm / 1812 mm

1818 mm / 1820 mm

1826 mm / 1828 mm

1834 mm / 1836 mm

1842 mm / 1844 mm

1850 mm / 1852 mm

1858 mm / 1860 mm

1866 mm / 1868 mm

1874 mm / 1876 mm

1882 mm / 1884 mm

1890 mm / 1892 mm

1898 mm / 1900 mm

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1922 mm / 1924 mm

1930 mm / 1932 mm

1938 mm / 1940 mm

1946 mm / 1948 mm

1954 mm / 1956 mm

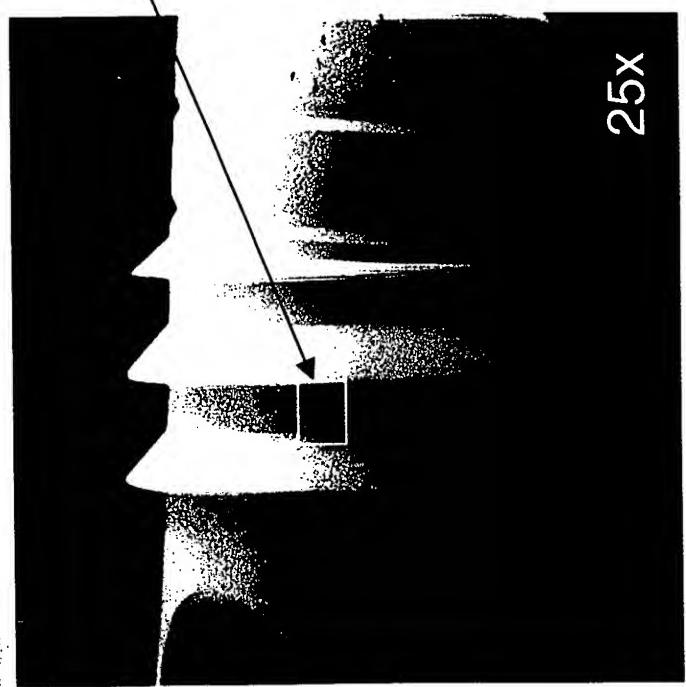
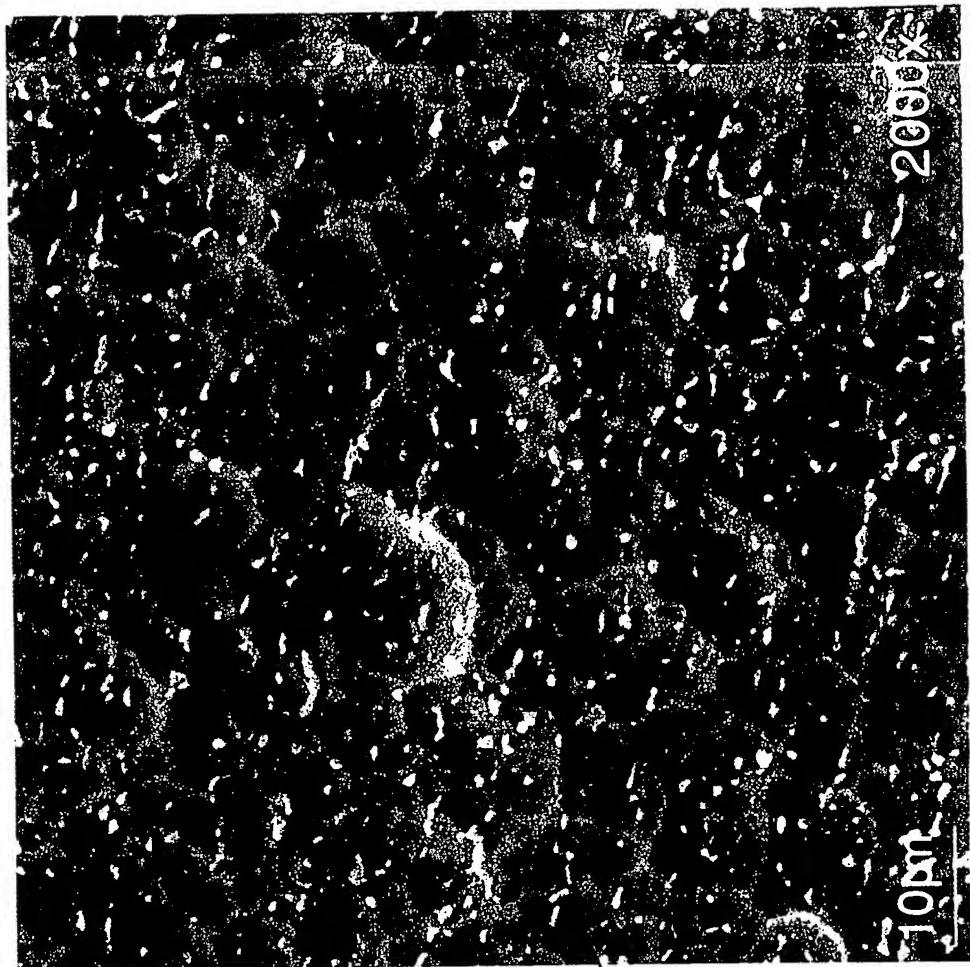
1962 mm / 1964 mm

1970 mm / 1972 mm

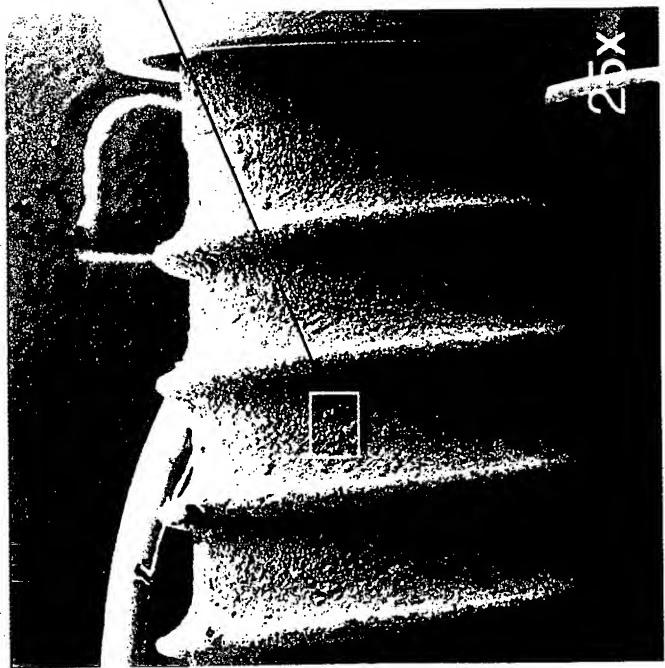
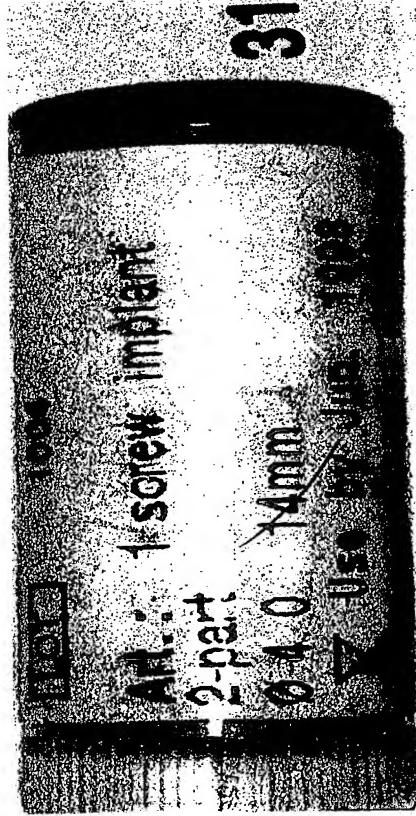
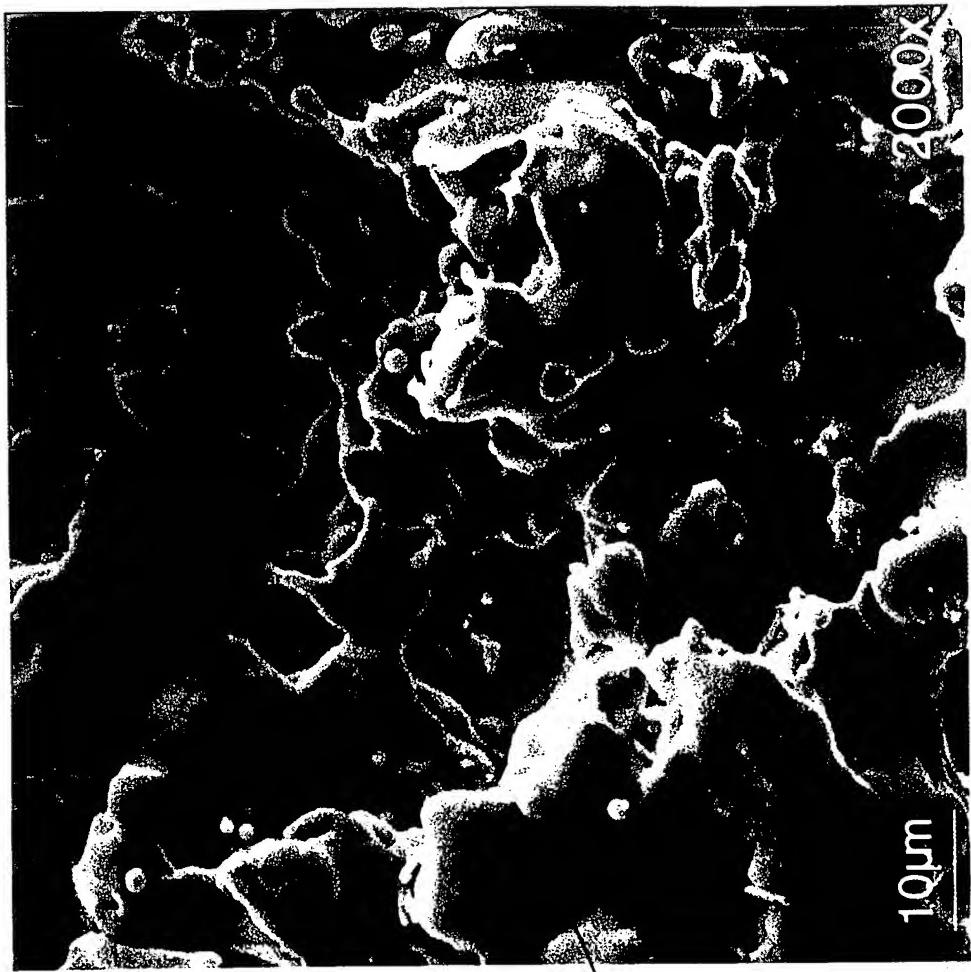
1978 mm / 1980 mm

1986 mm / 1988 mm

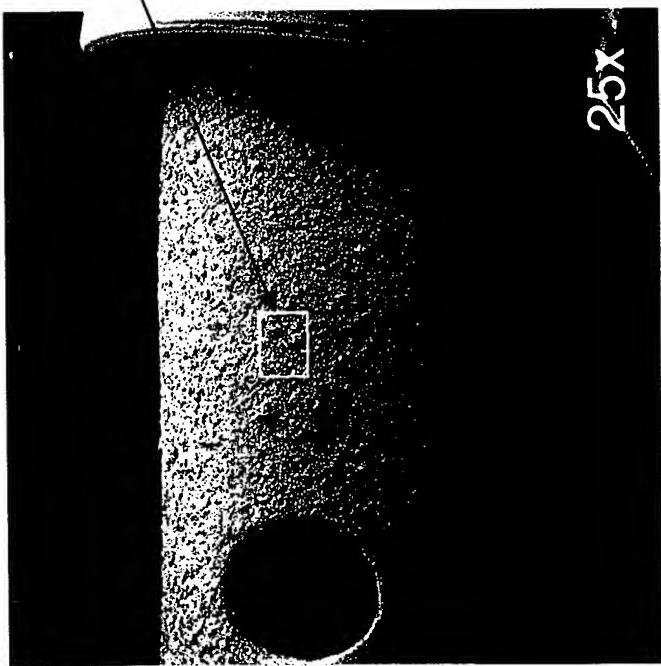
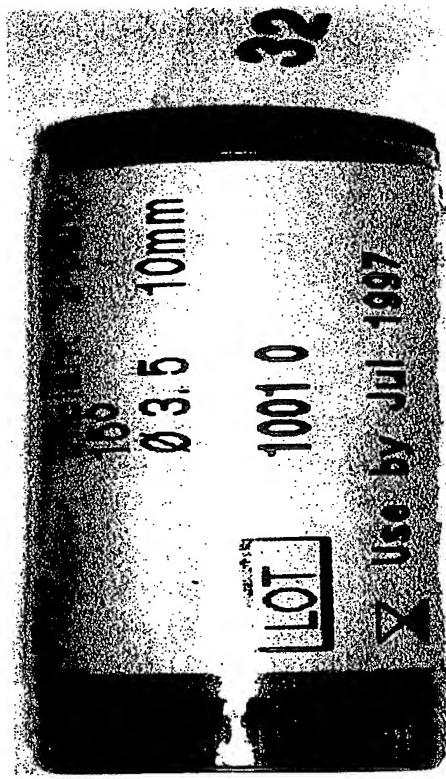
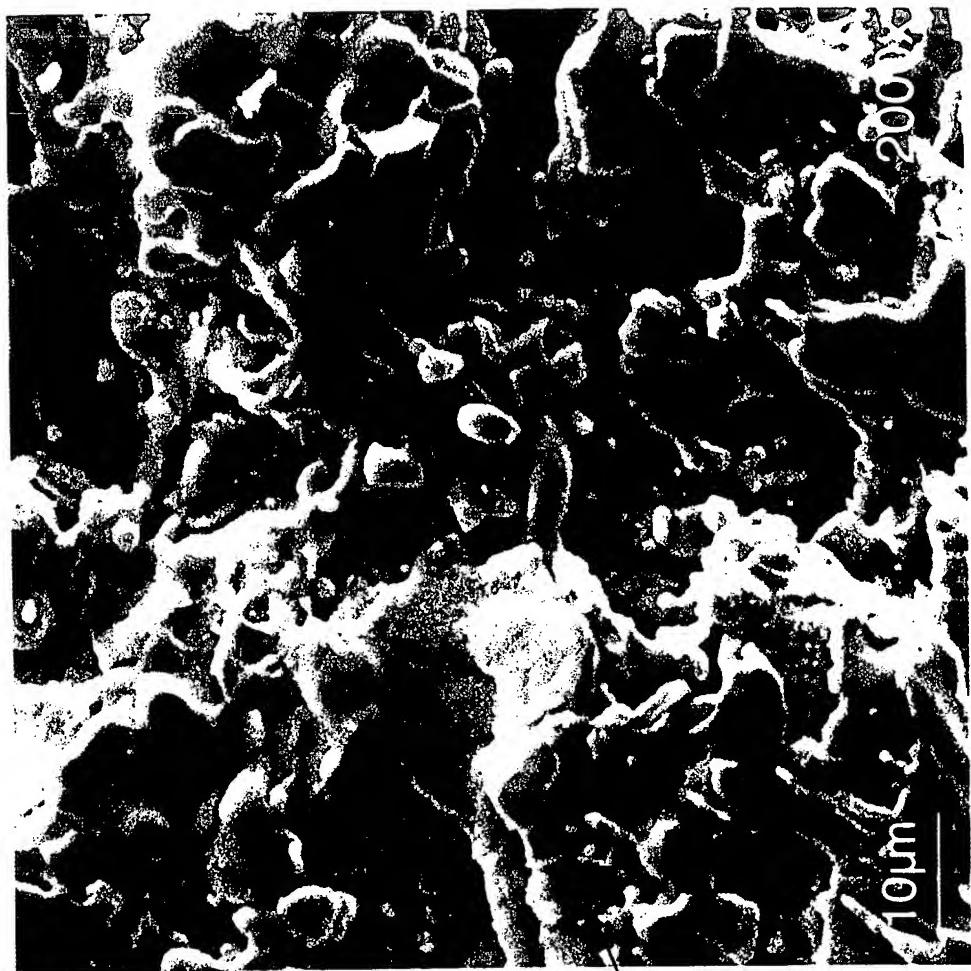
30. Core-Vent



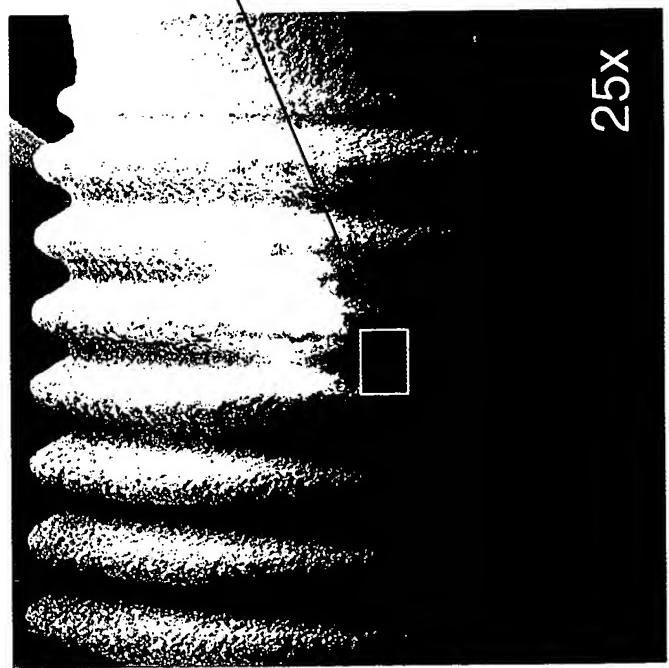
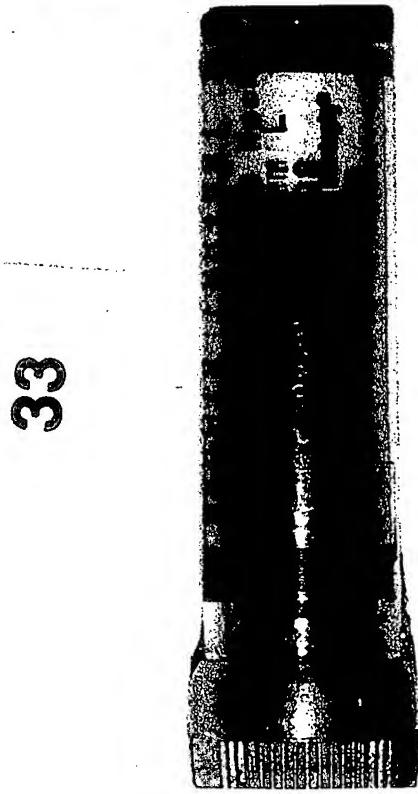
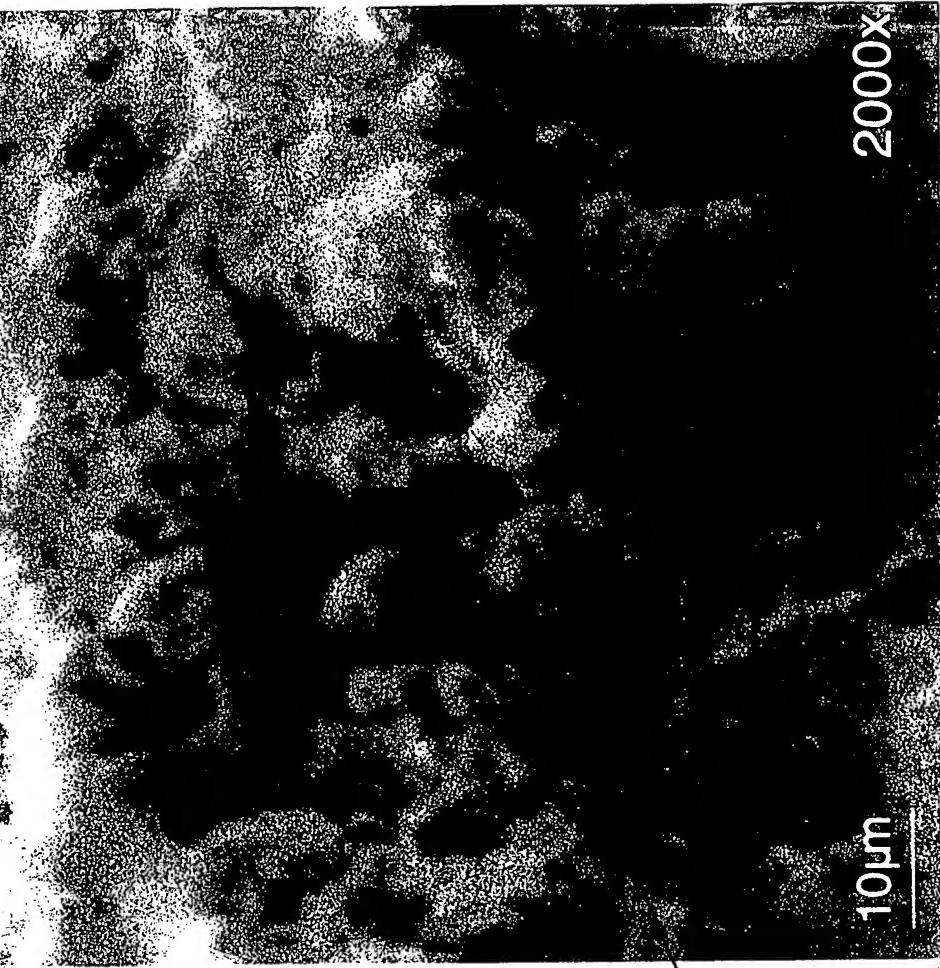
31. Straumann



32. Institut Straumann

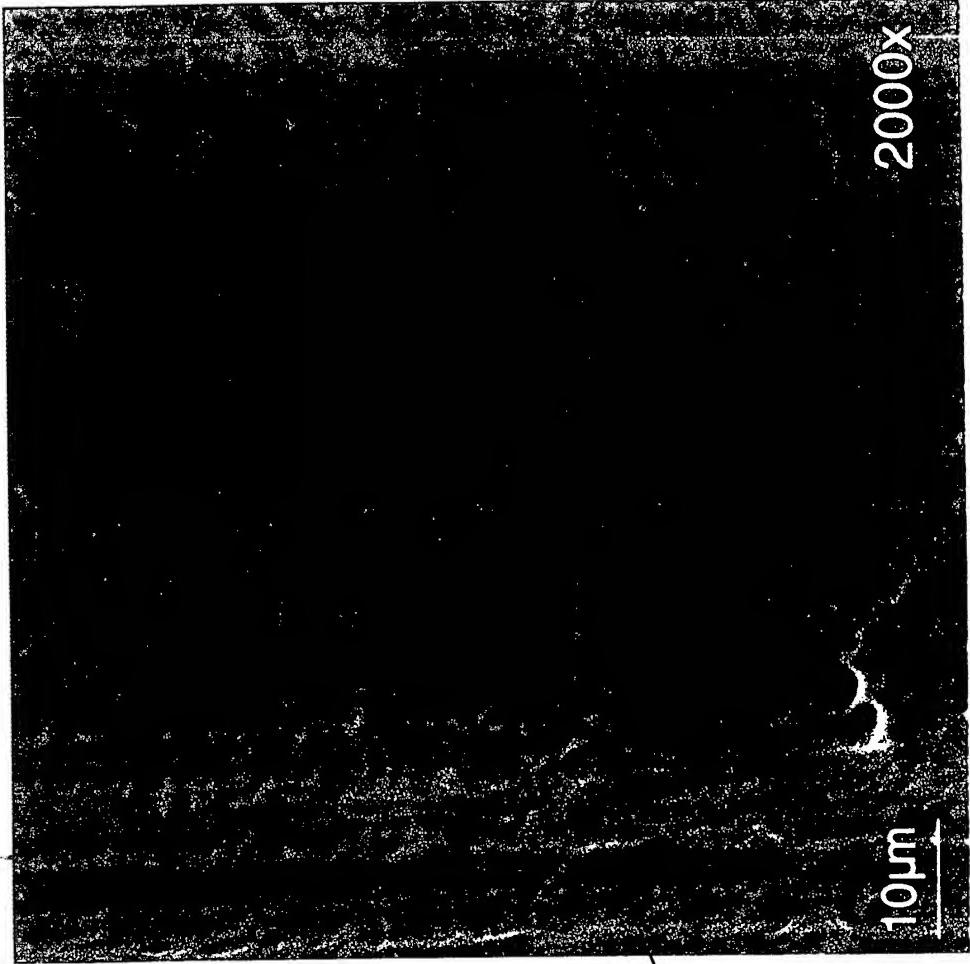
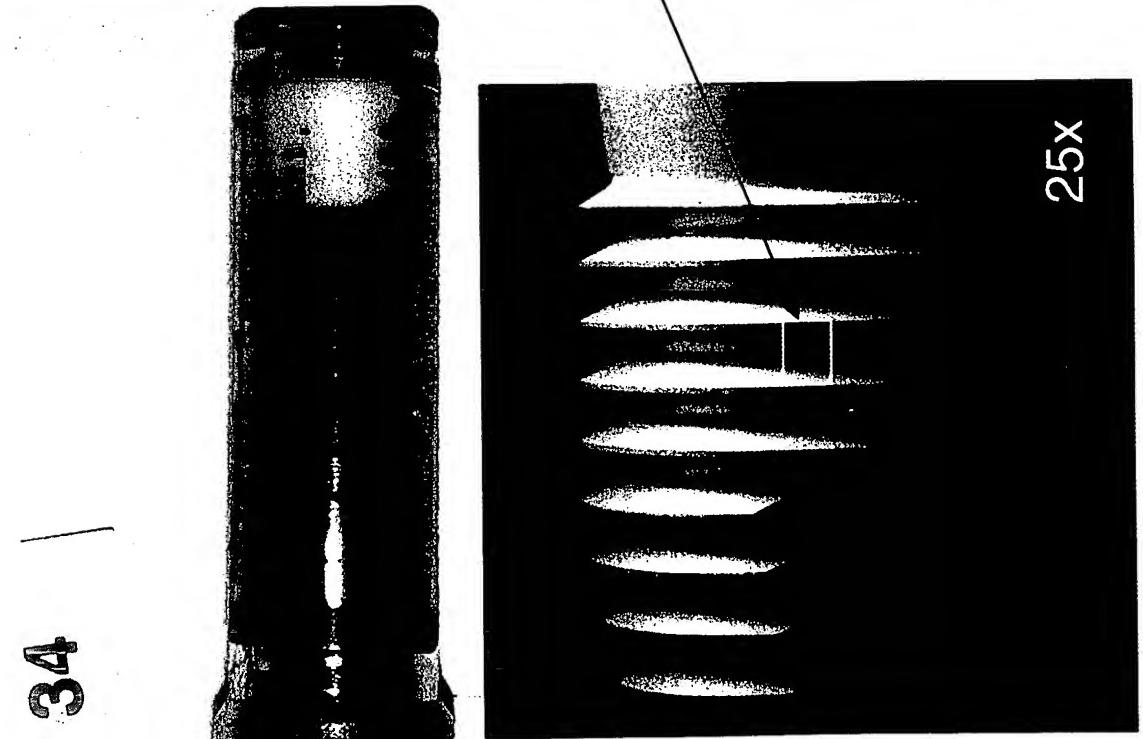
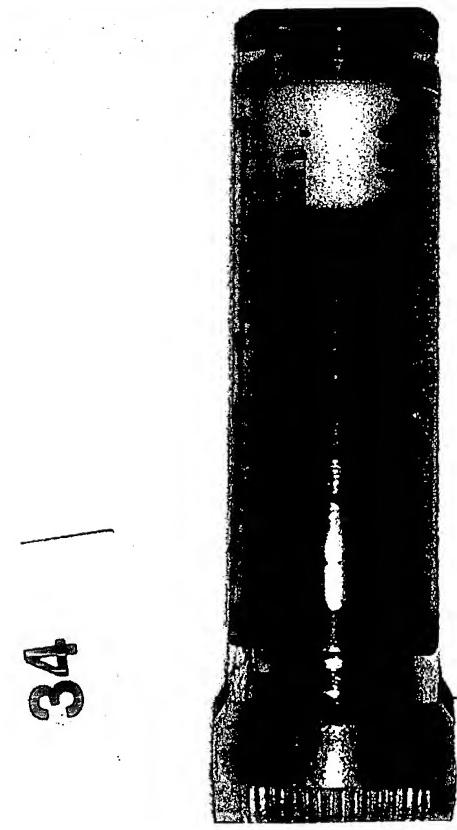


33. Dentsply Core-Vent

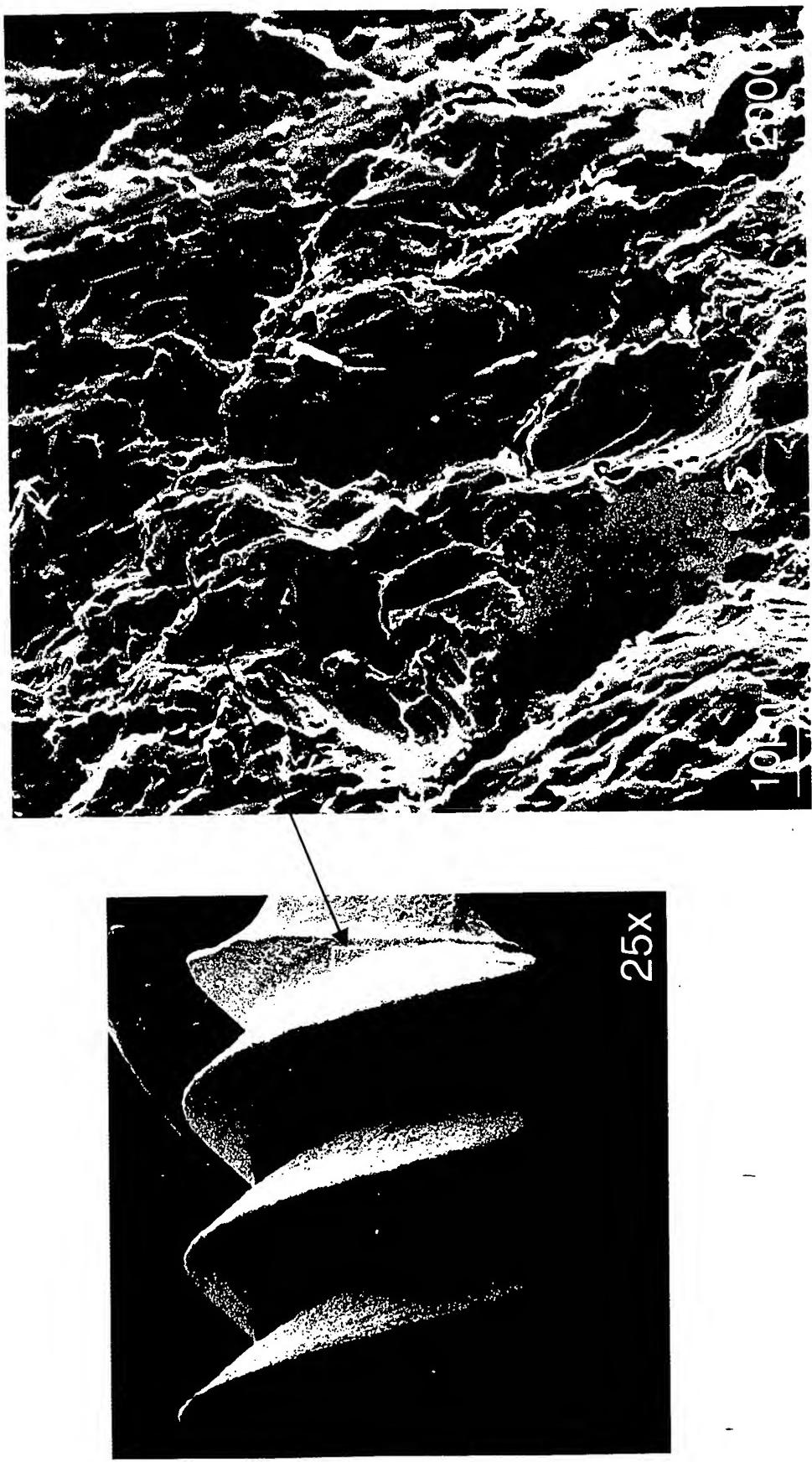


34. Dentsply Core-Vent

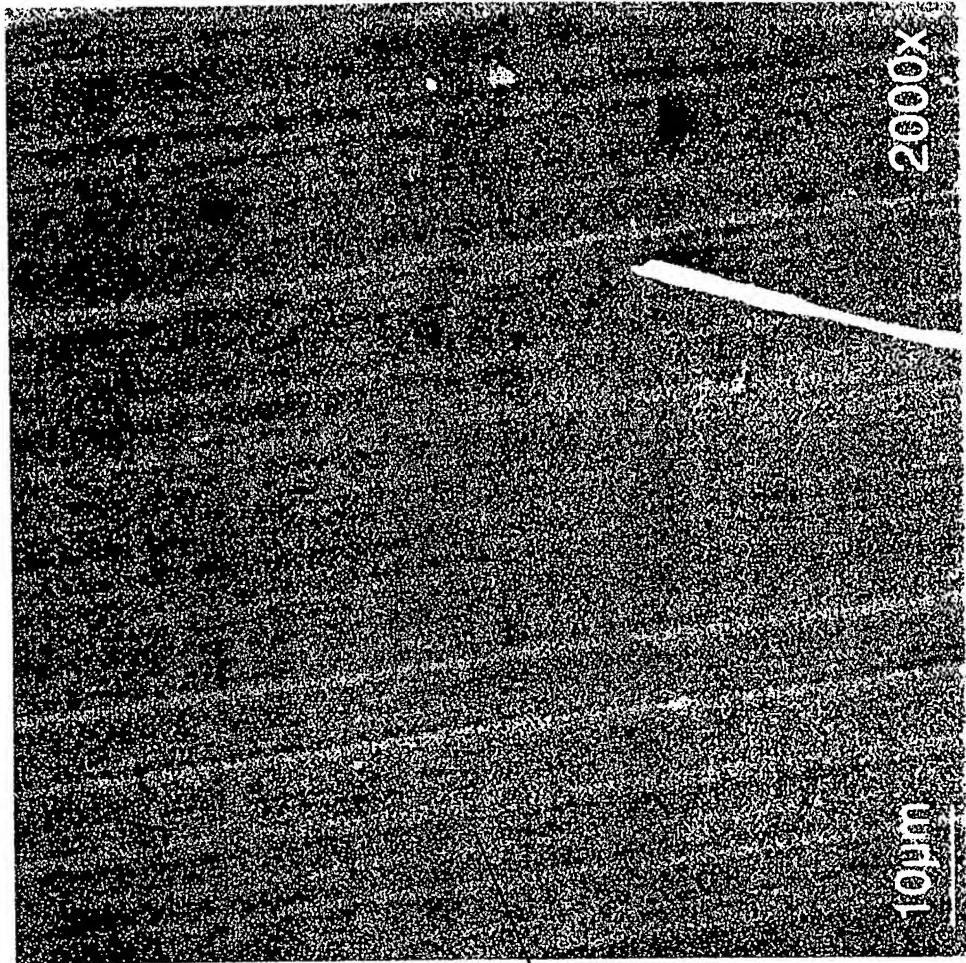
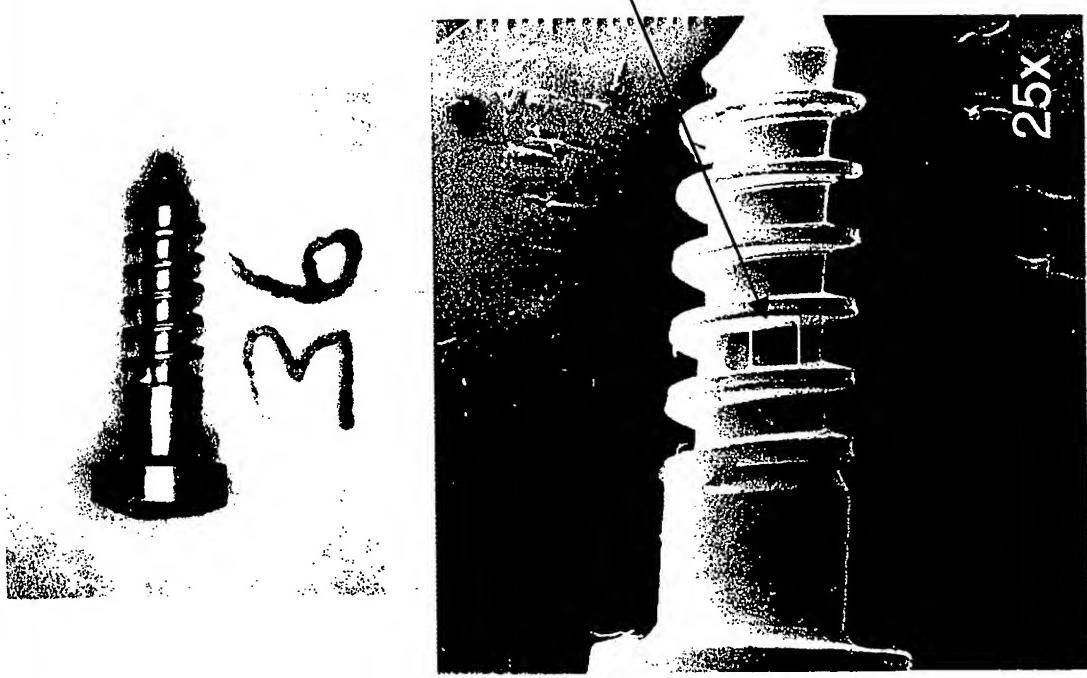
34



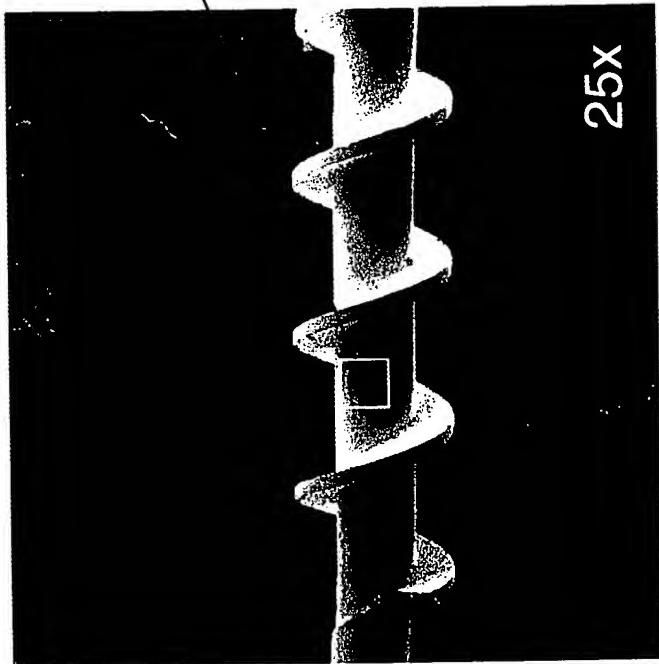
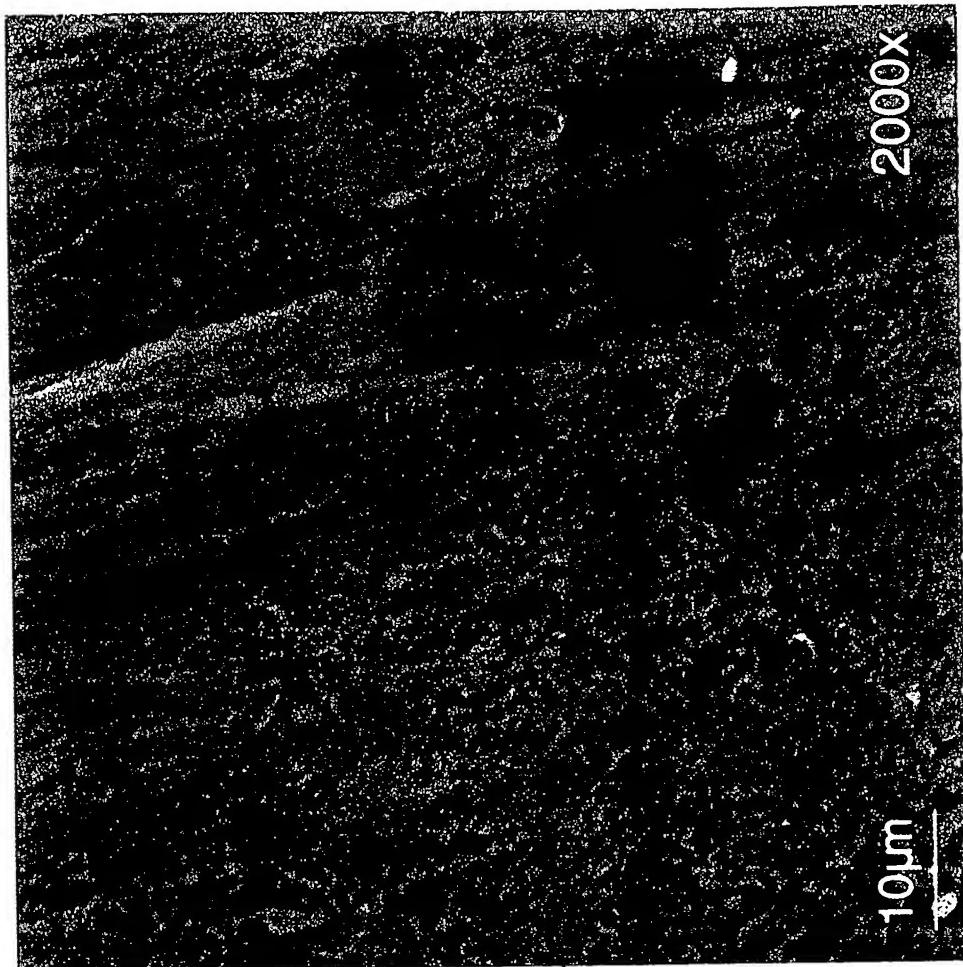
35. Cherchev Implant



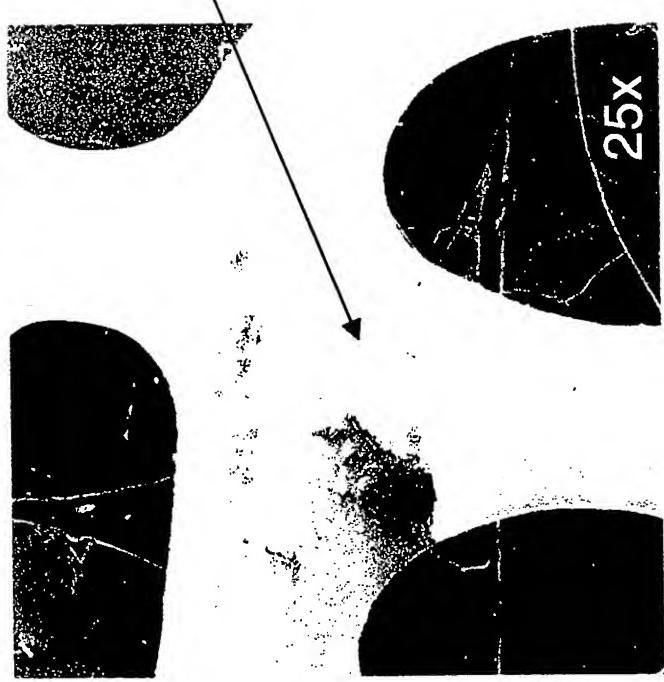
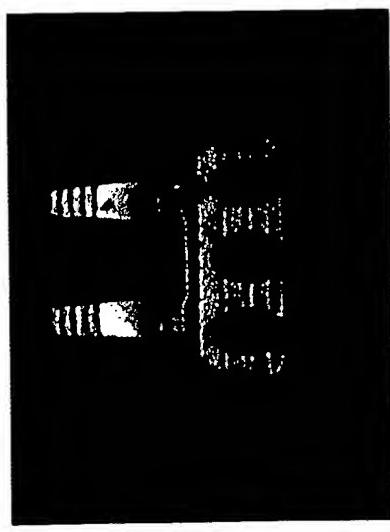
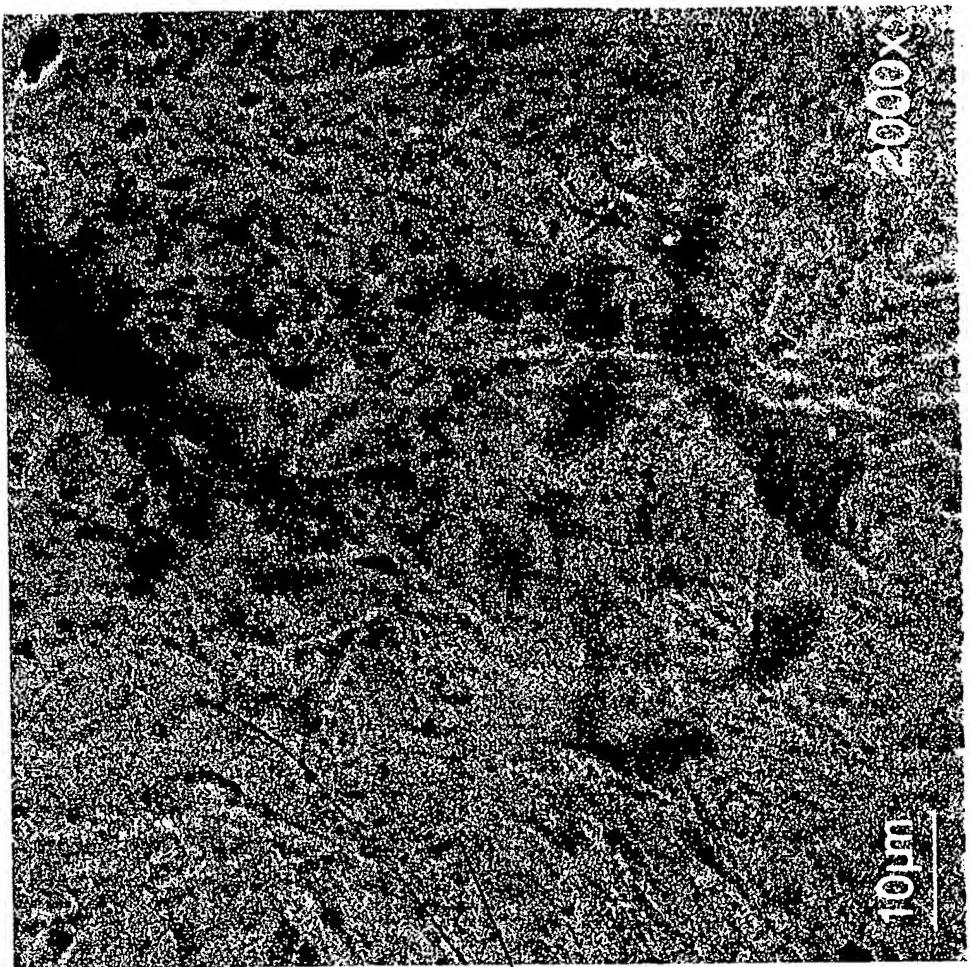
36. Samson Titanium Screw



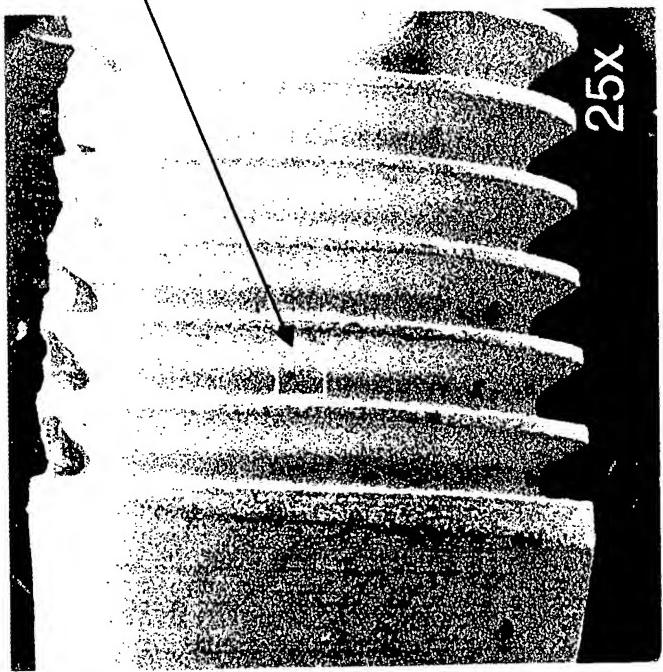
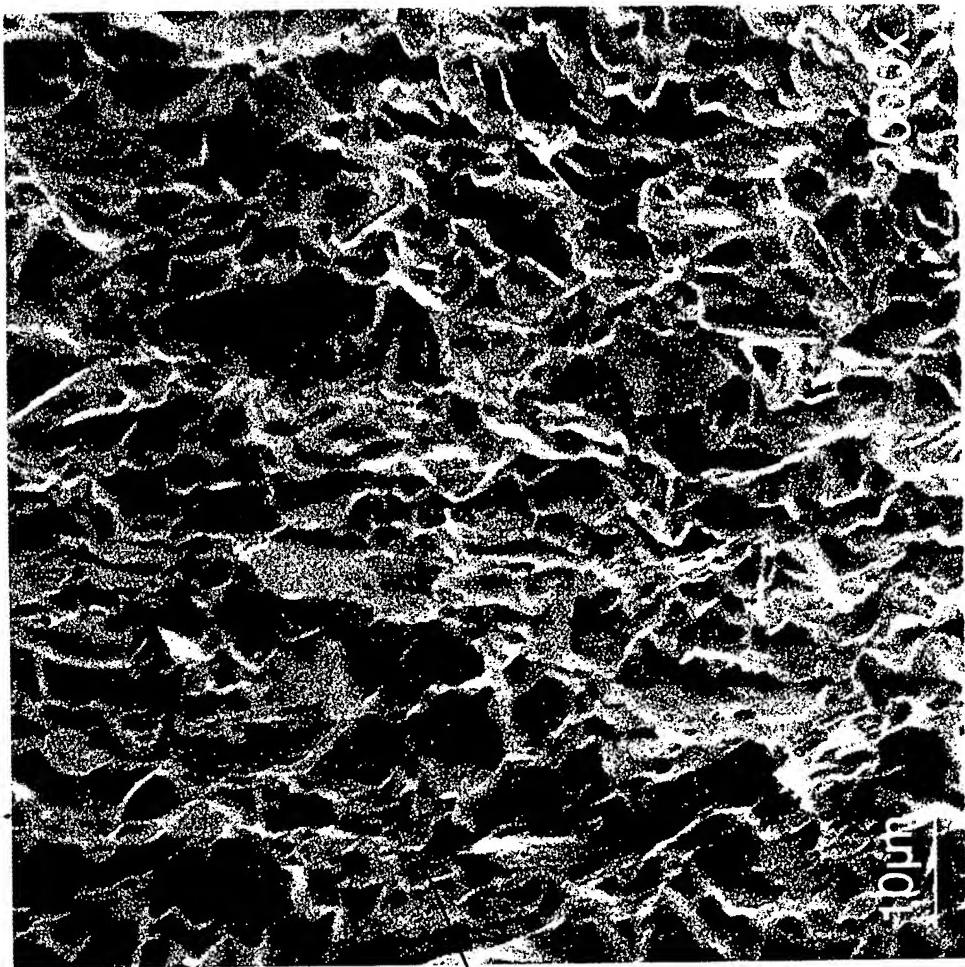
37. Oratronics Spiral



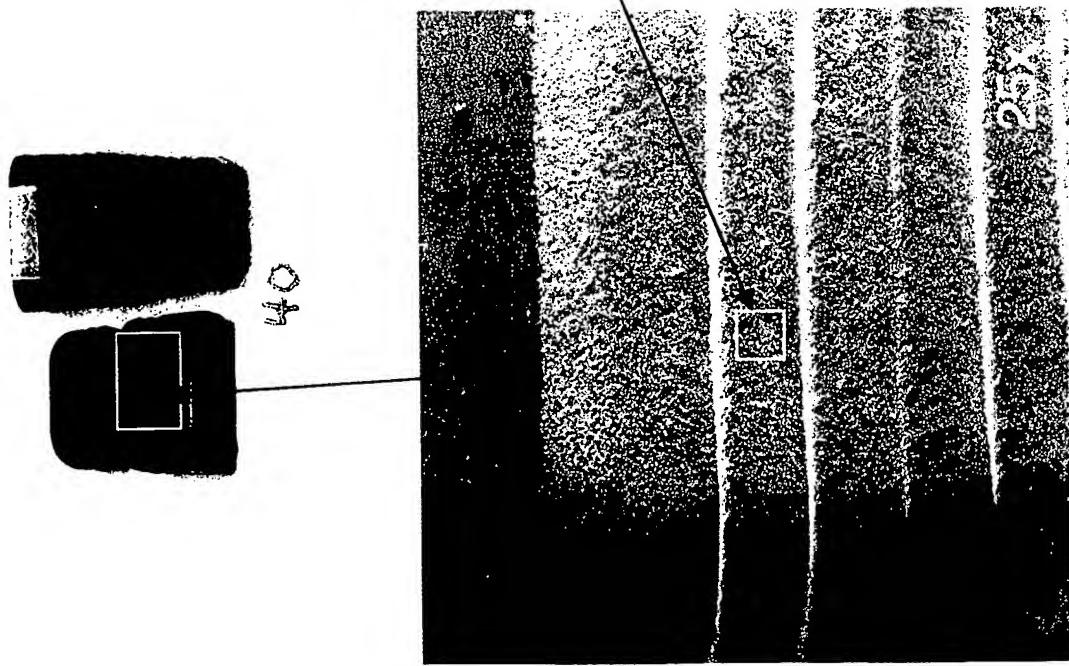
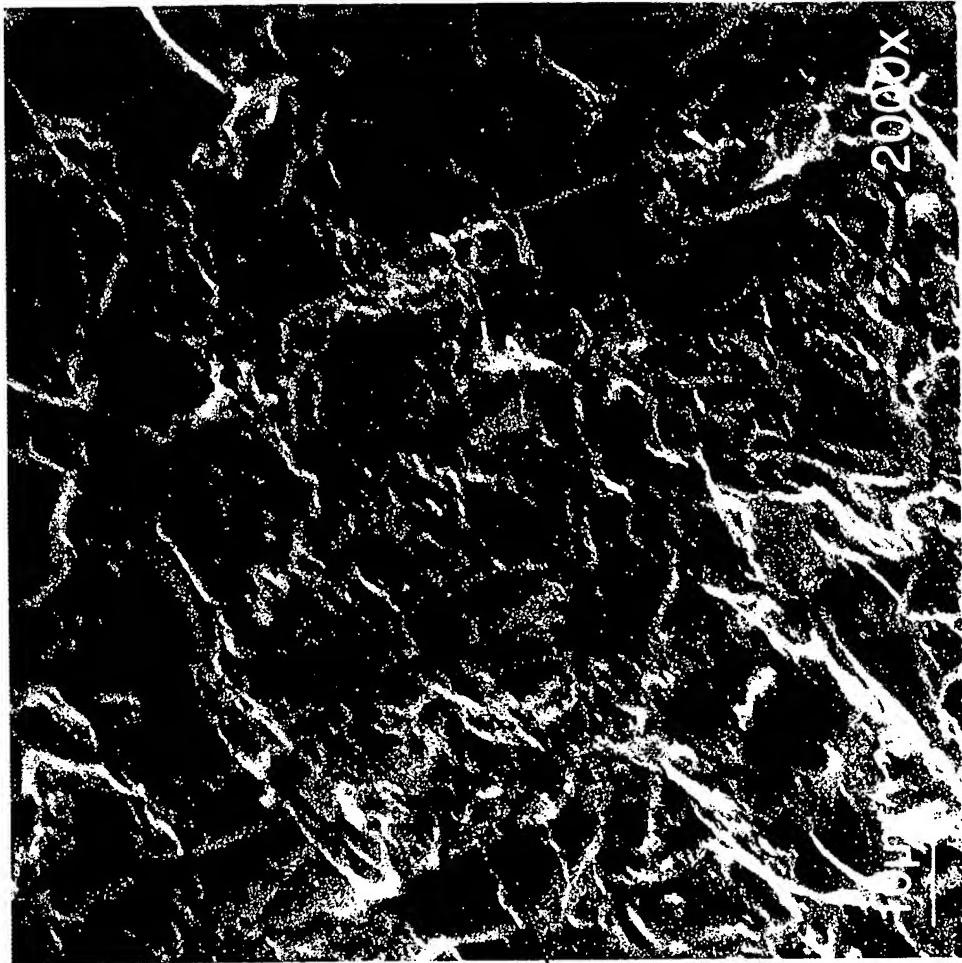
38. Oratronics Blade



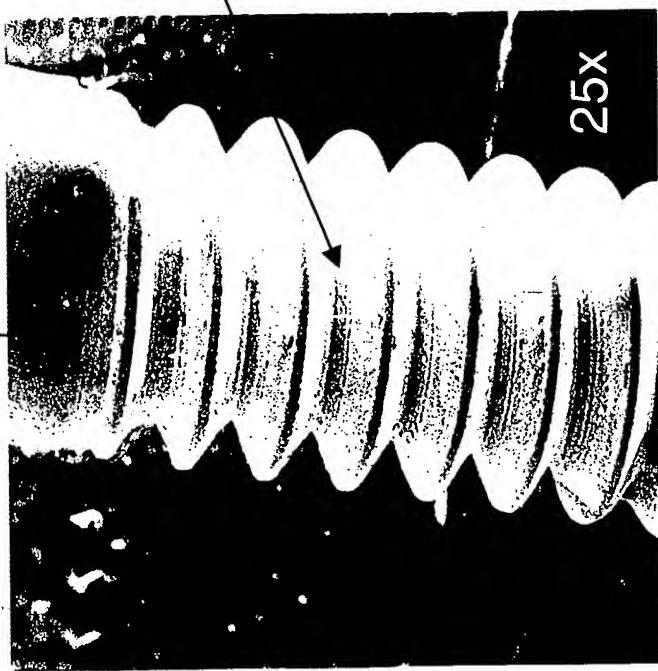
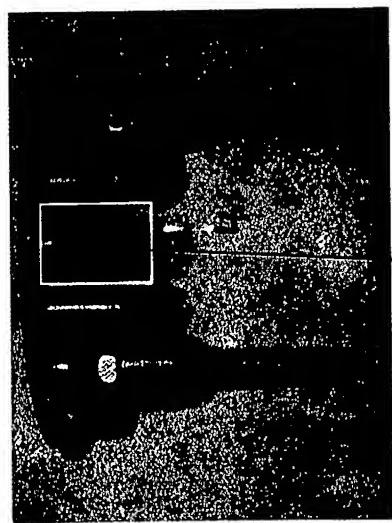
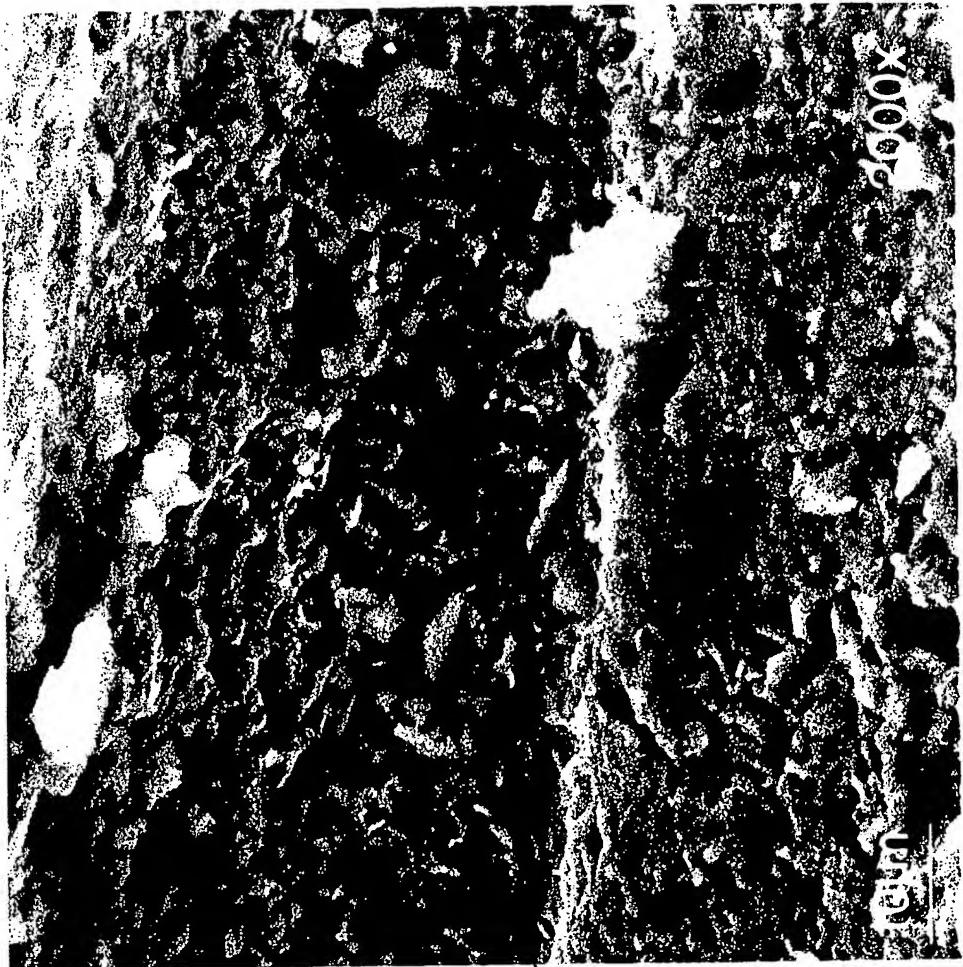
39. Synthodont



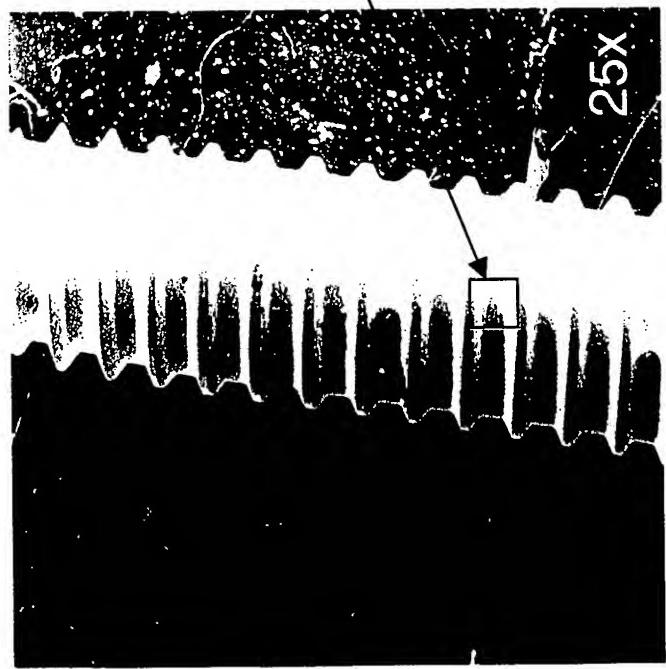
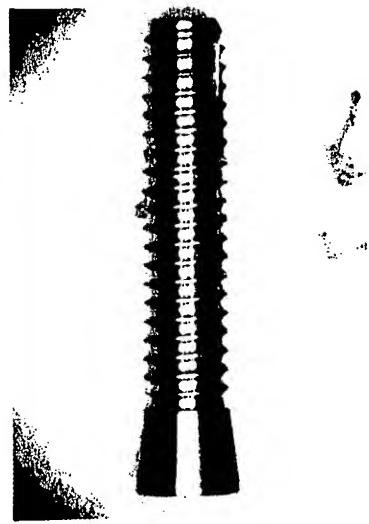
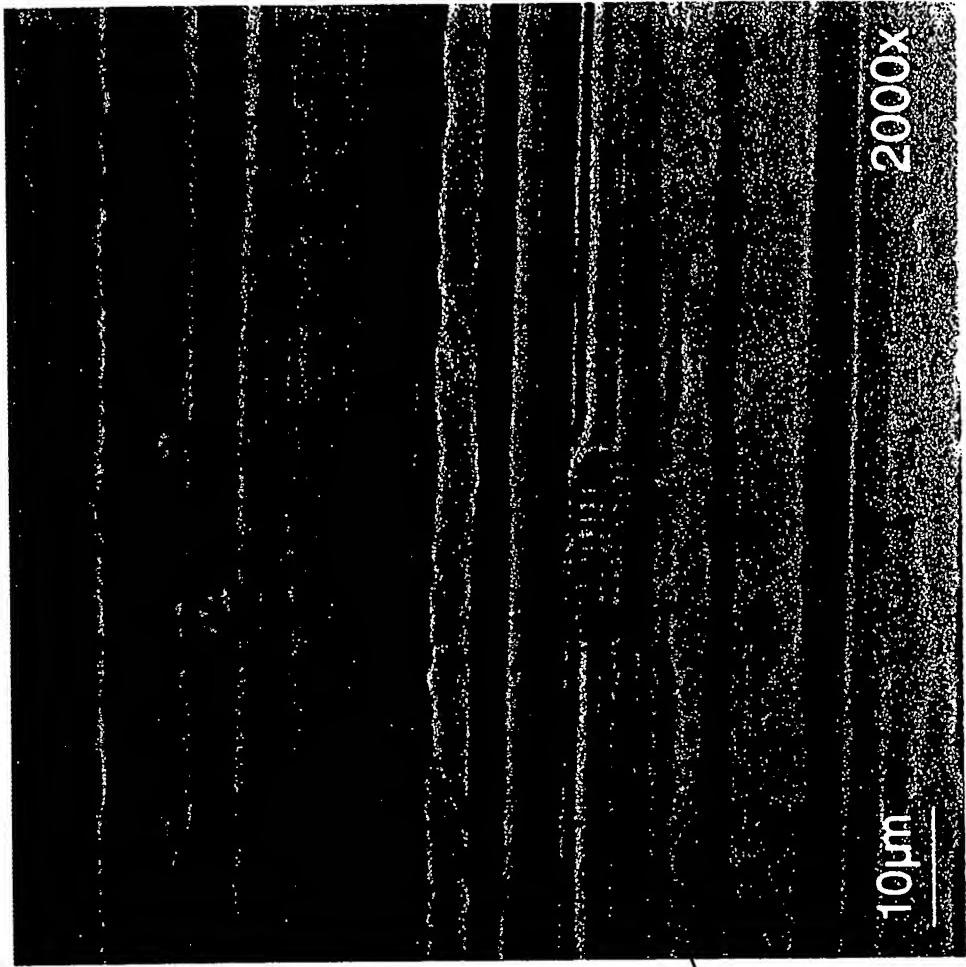
40. Vitradent



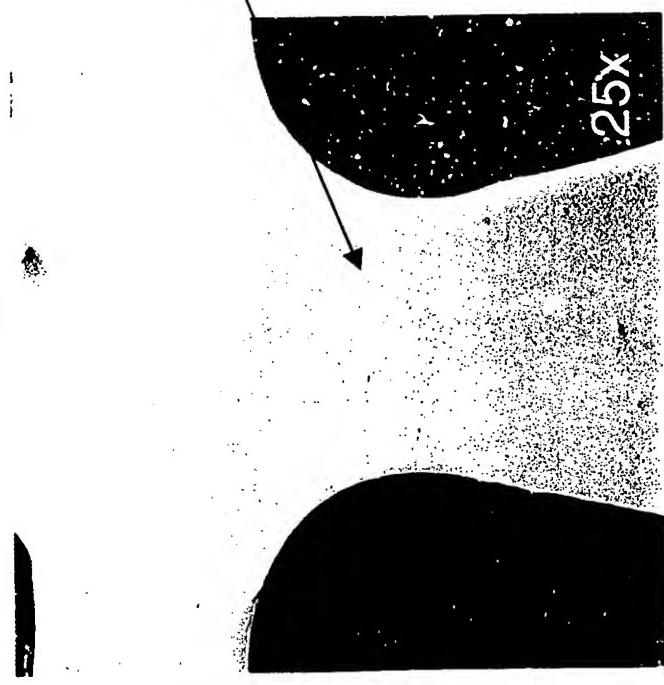
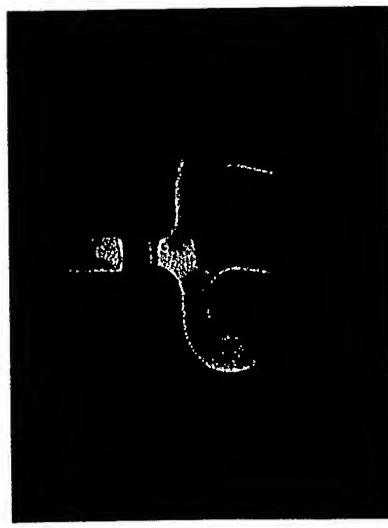
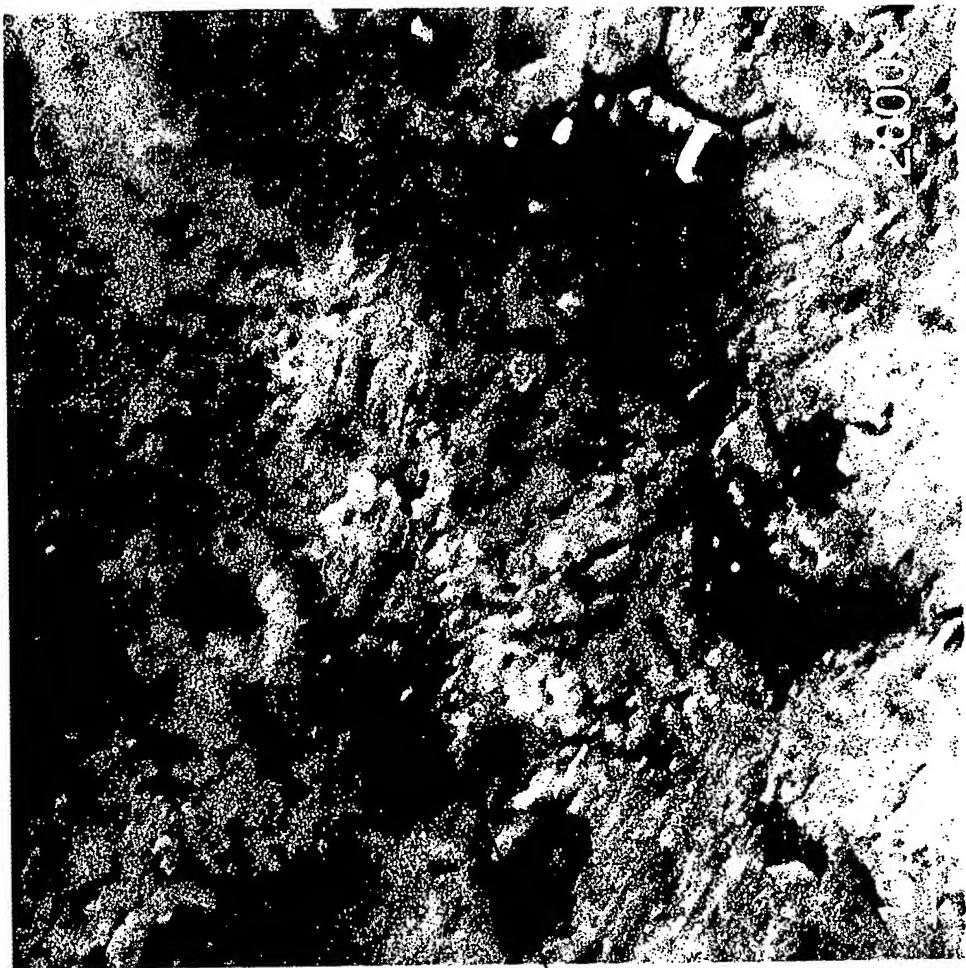
41. Zimmer Mandibular Staple



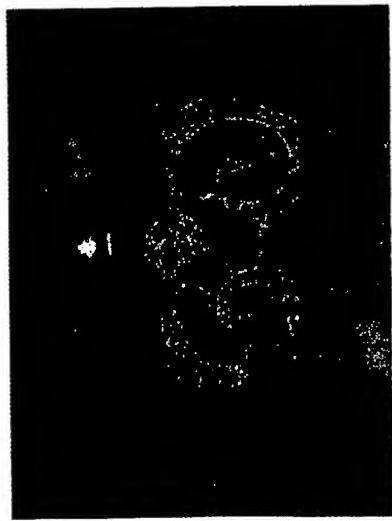
42. MI-150-TI



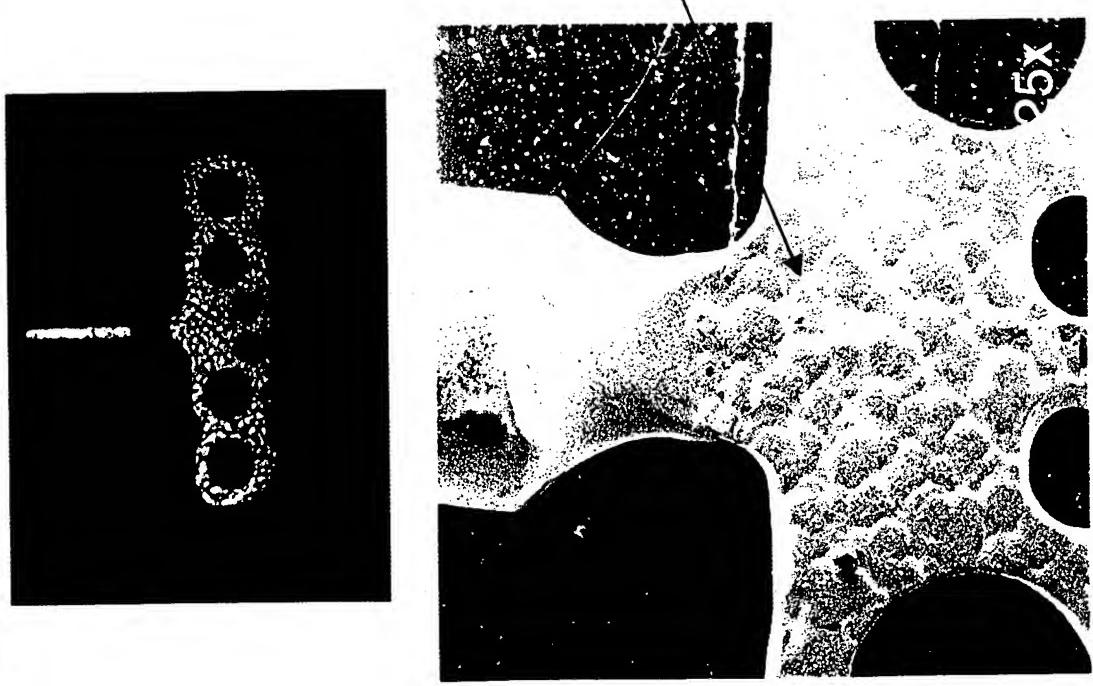
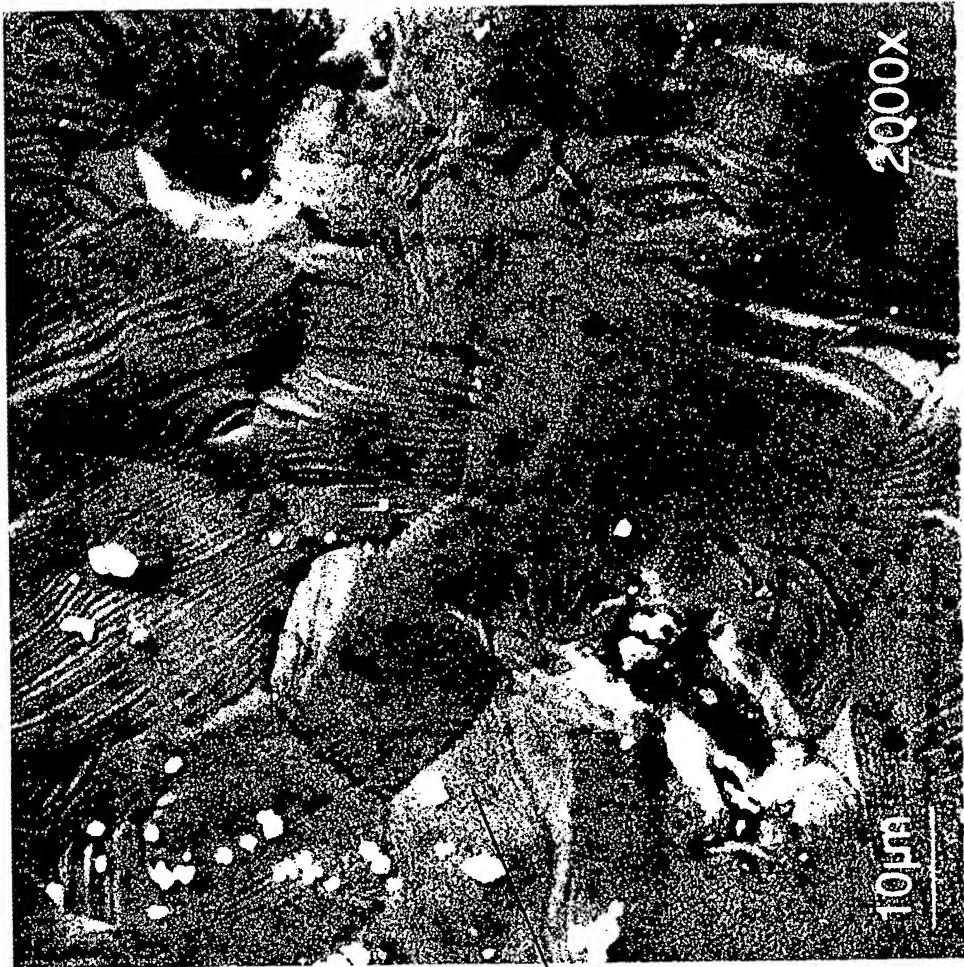
43. Ti 1968-70



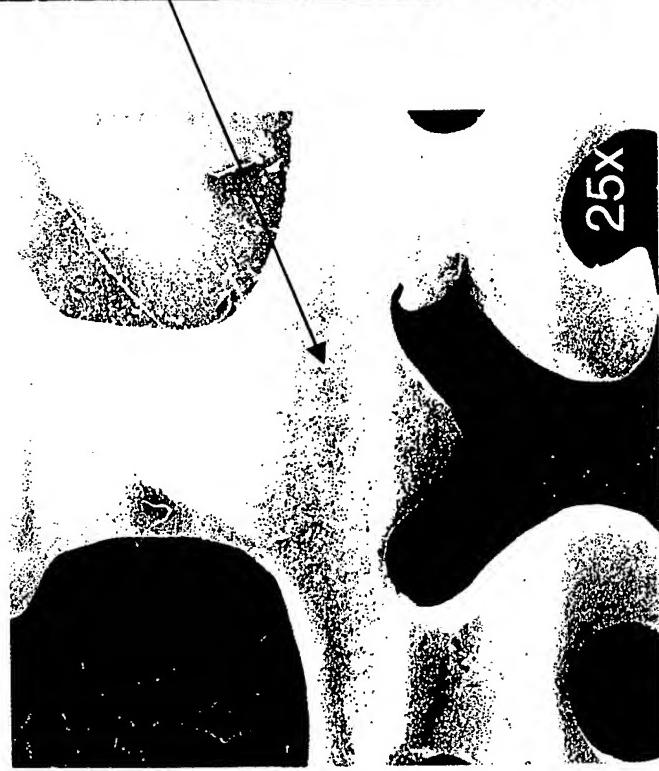
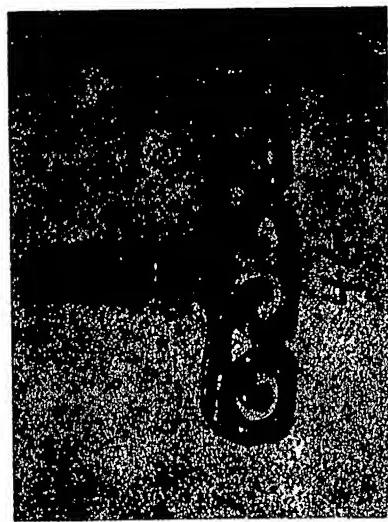
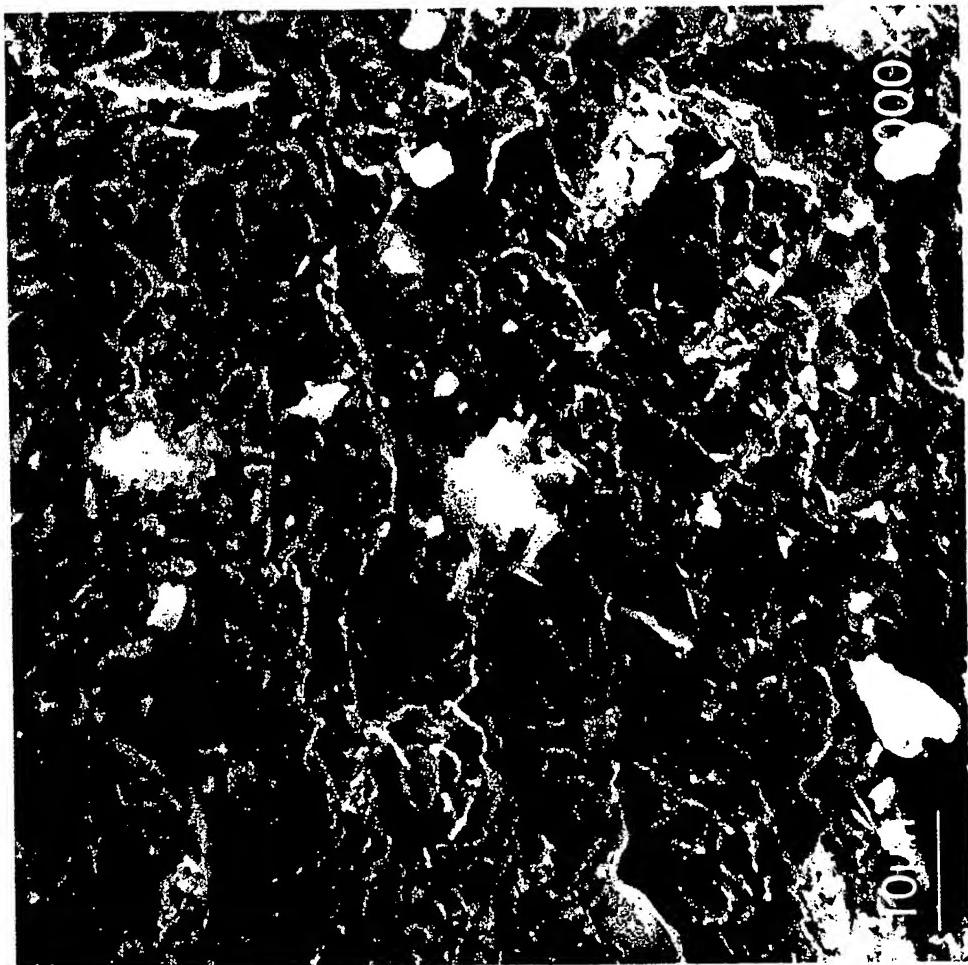
44. Cast Vitallium Surgical



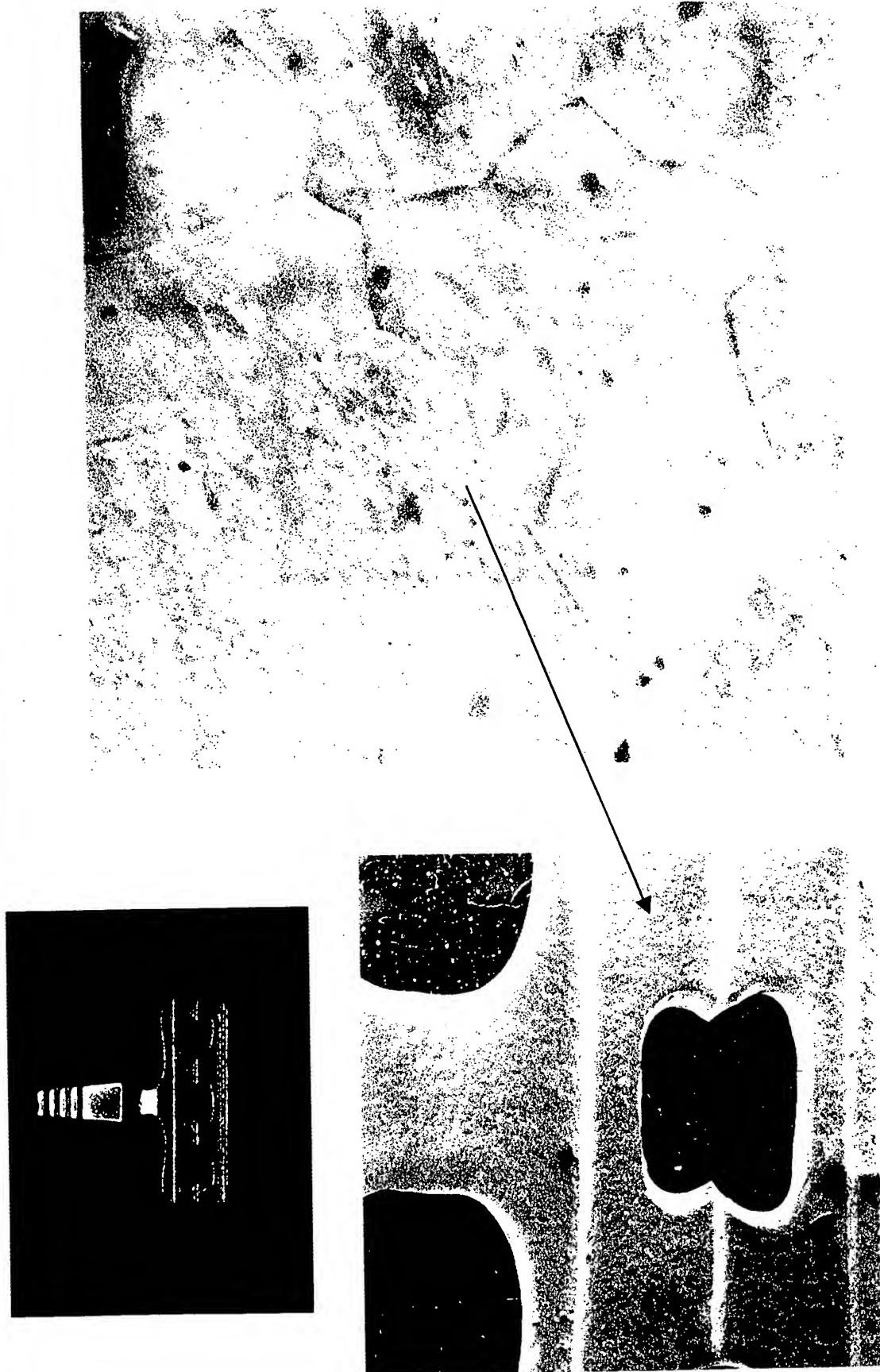
45. Park Dental



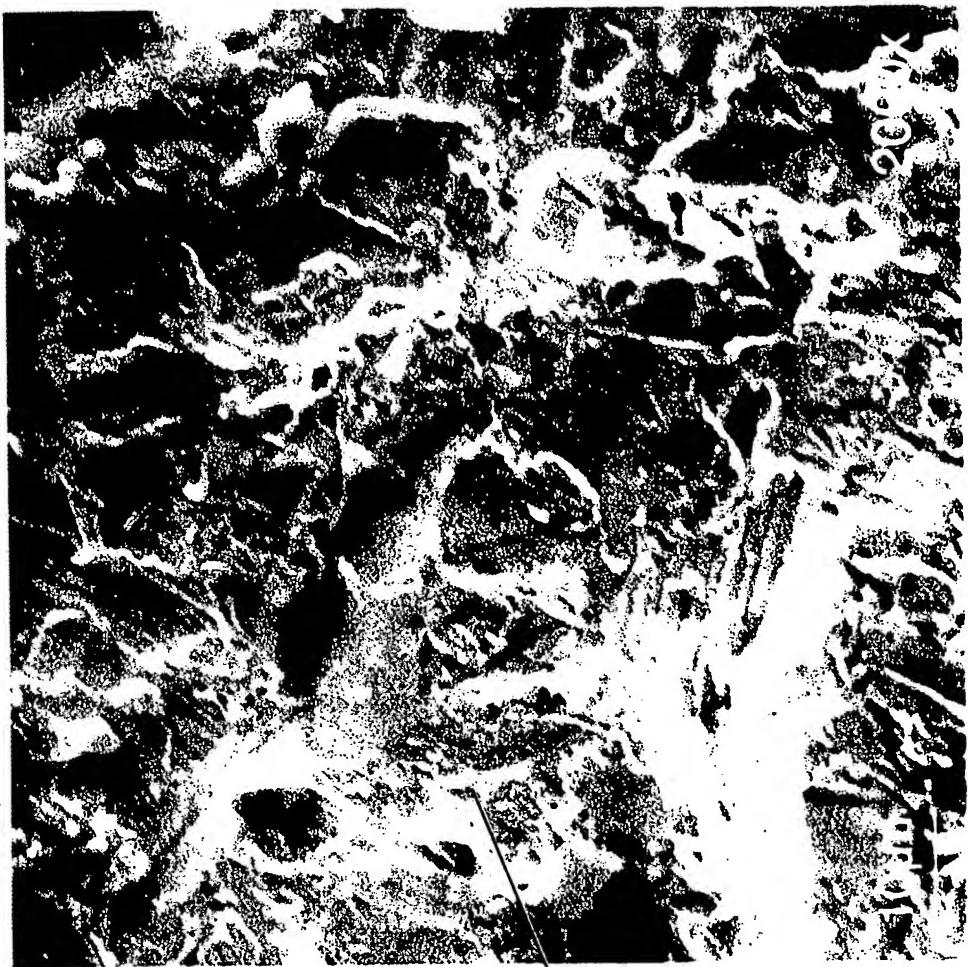
46. Babbush Implants



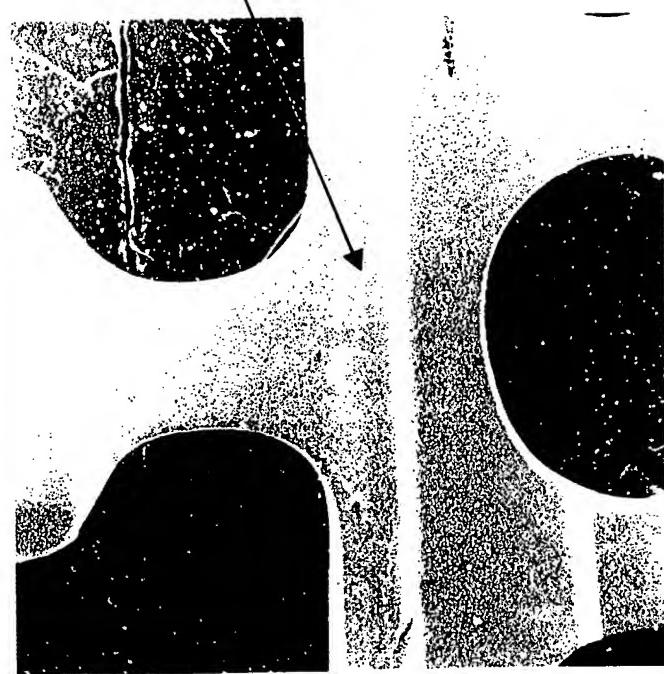
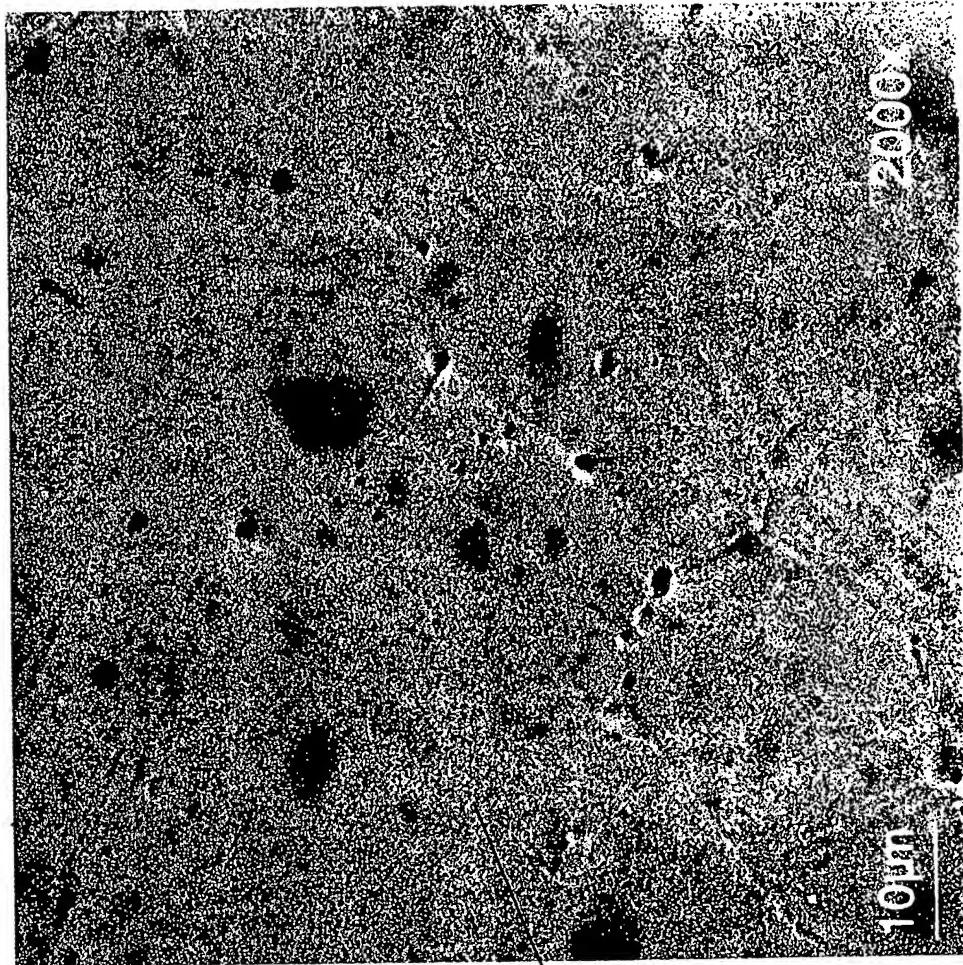
47. Oratronics



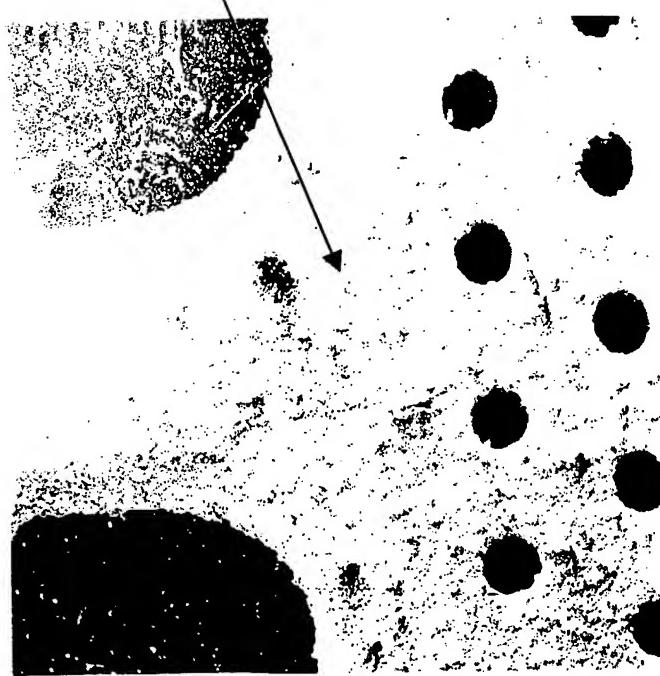
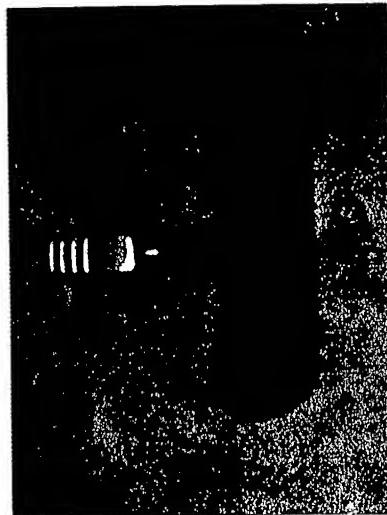
48. *Swingos*



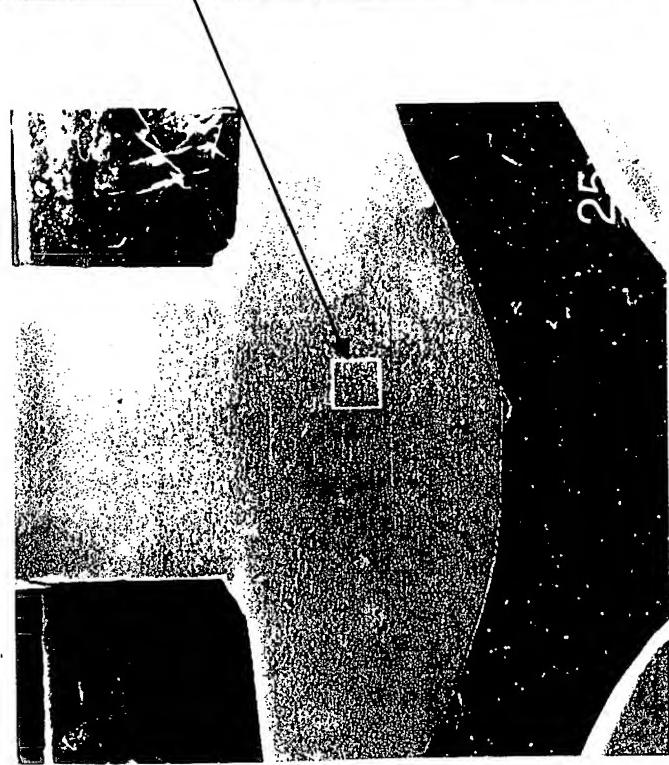
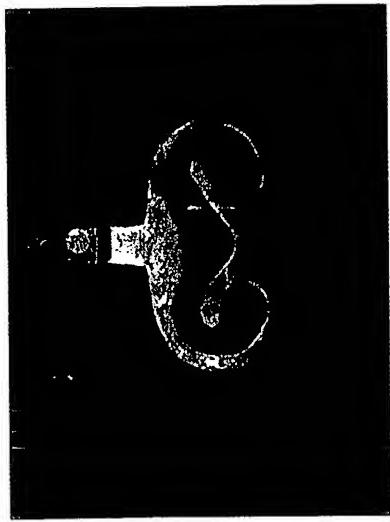
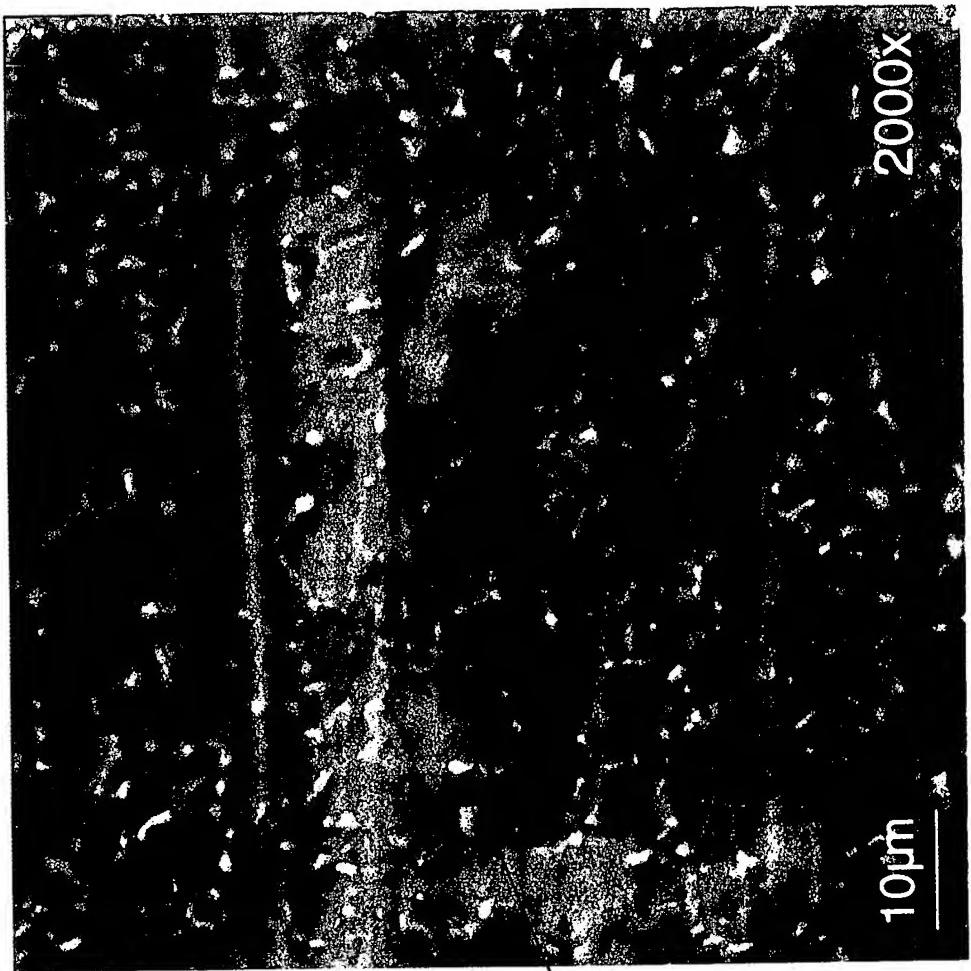
49. Konkoly



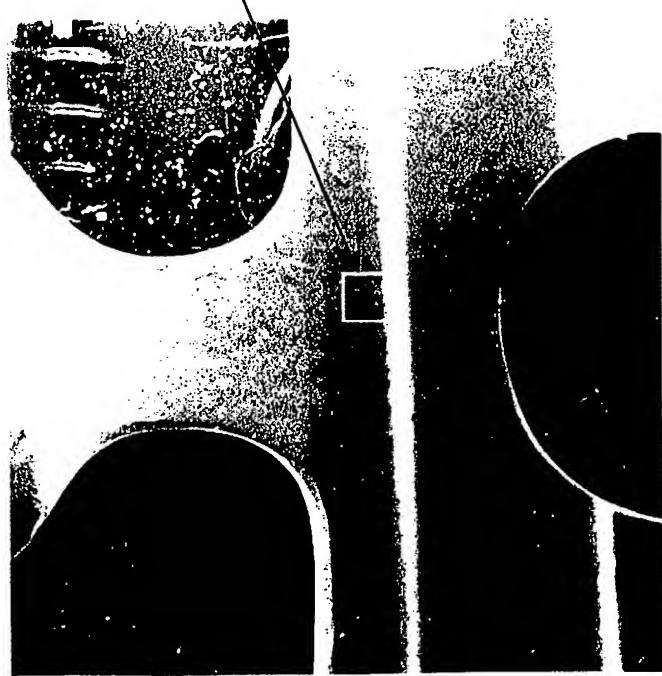
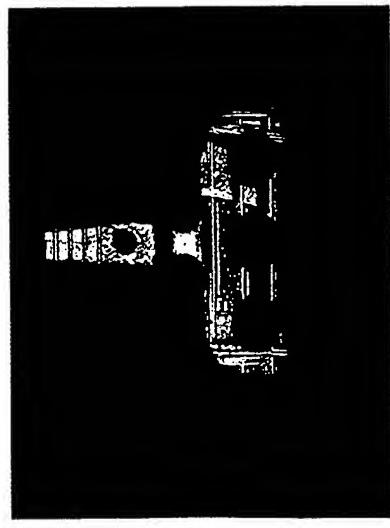
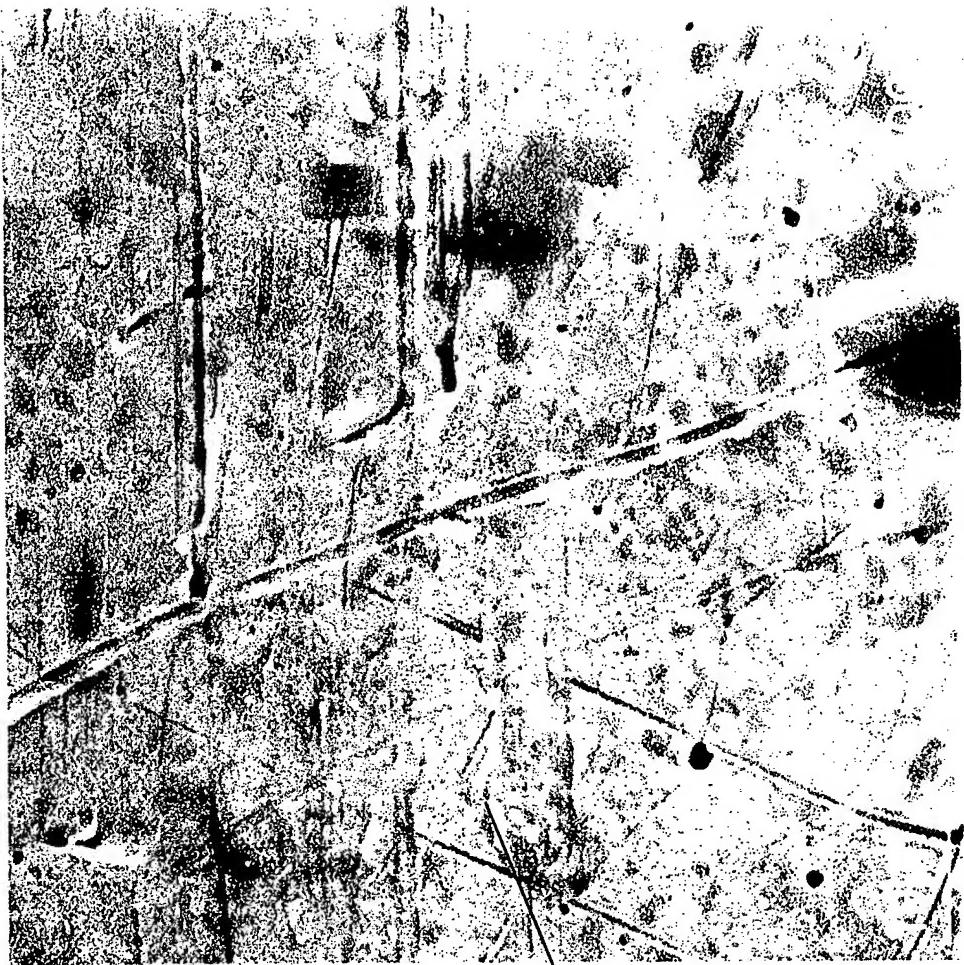
50. Sulzer Protusil



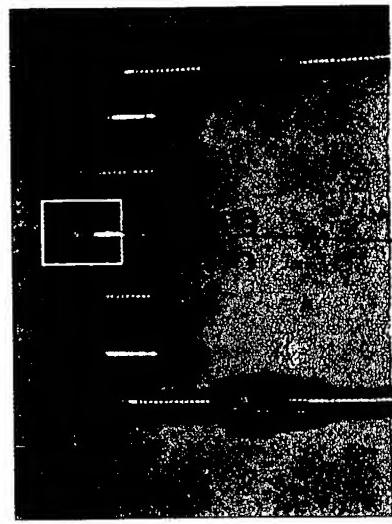
51. IRC



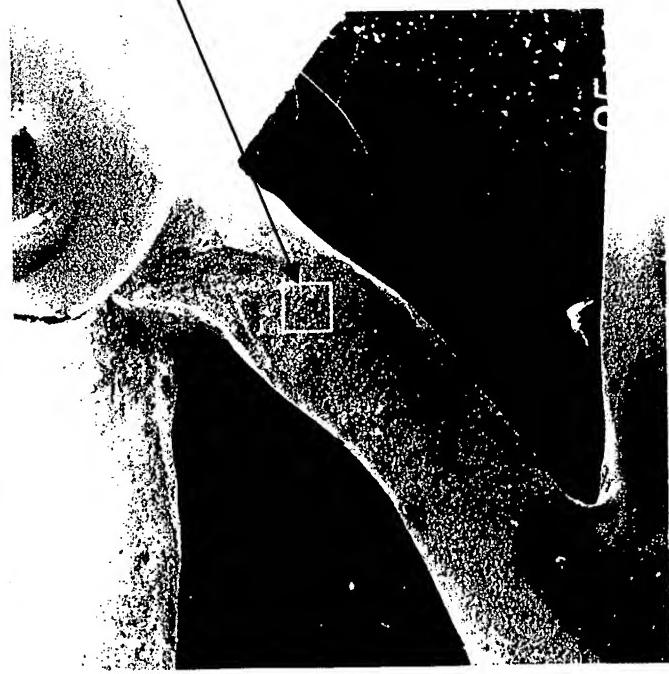
52. Oratronics



53. Hamilton



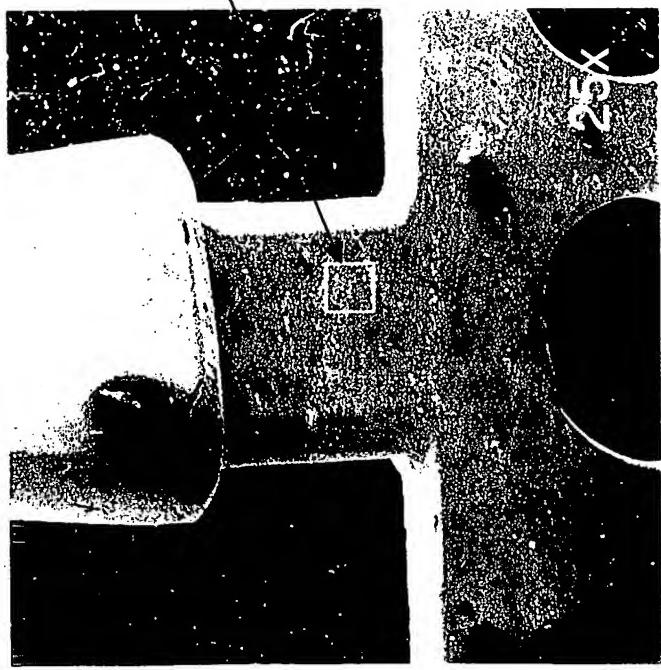
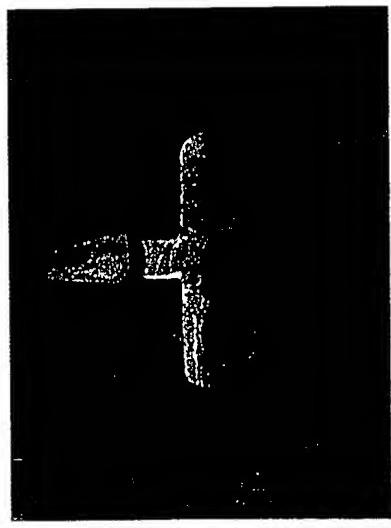
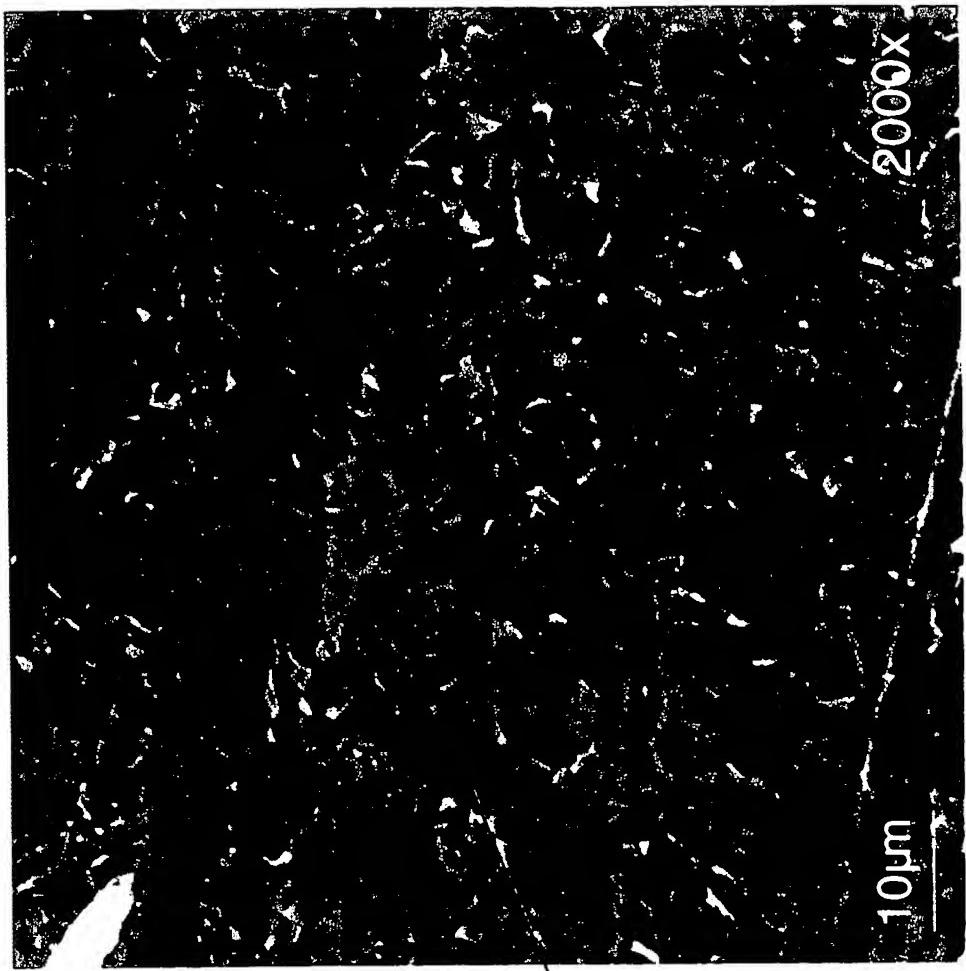
54. Barton Partial



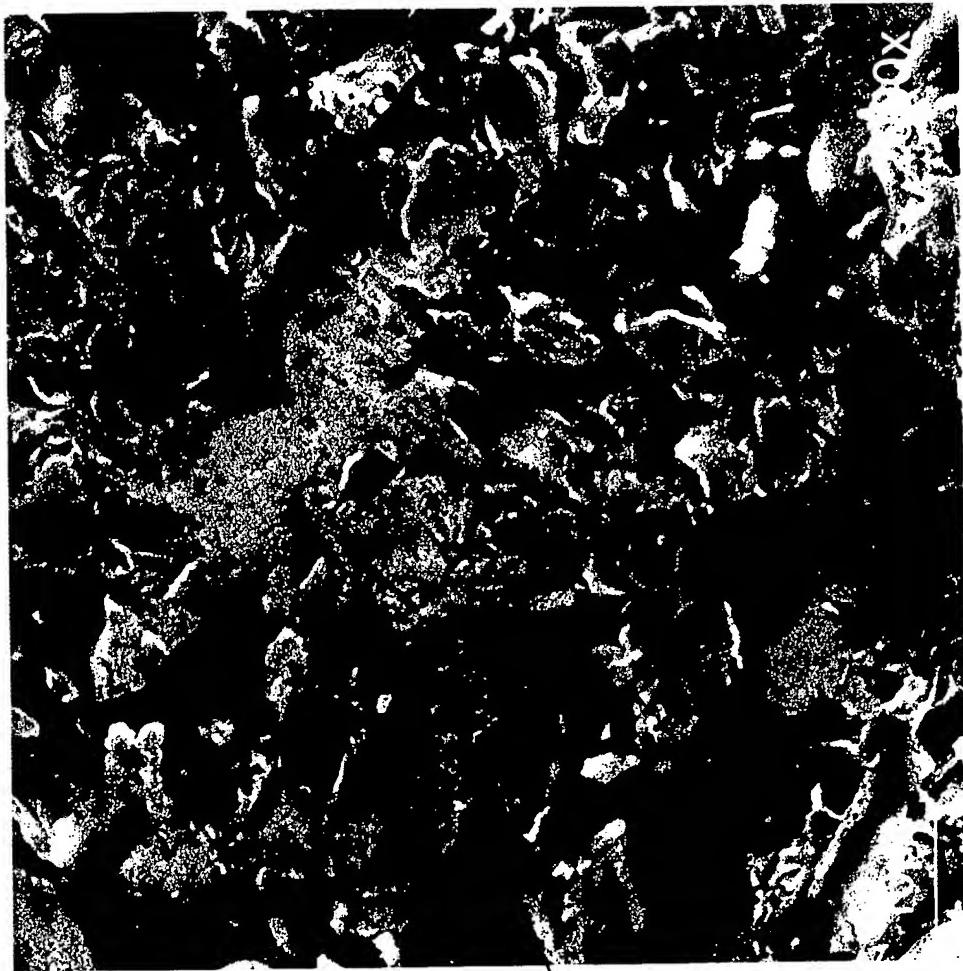
55. Arenson



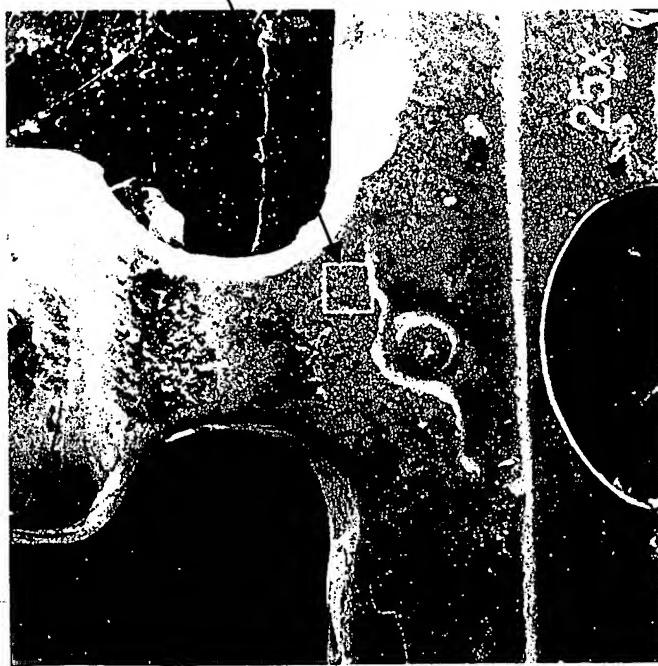
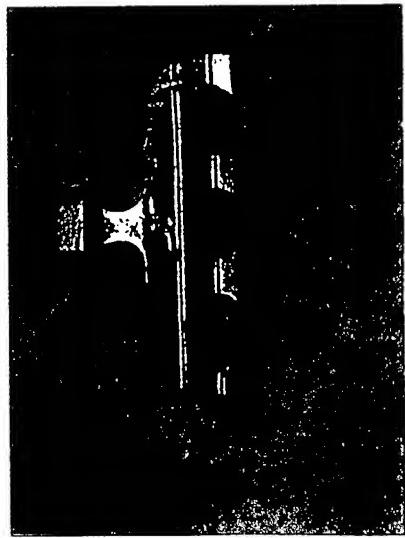
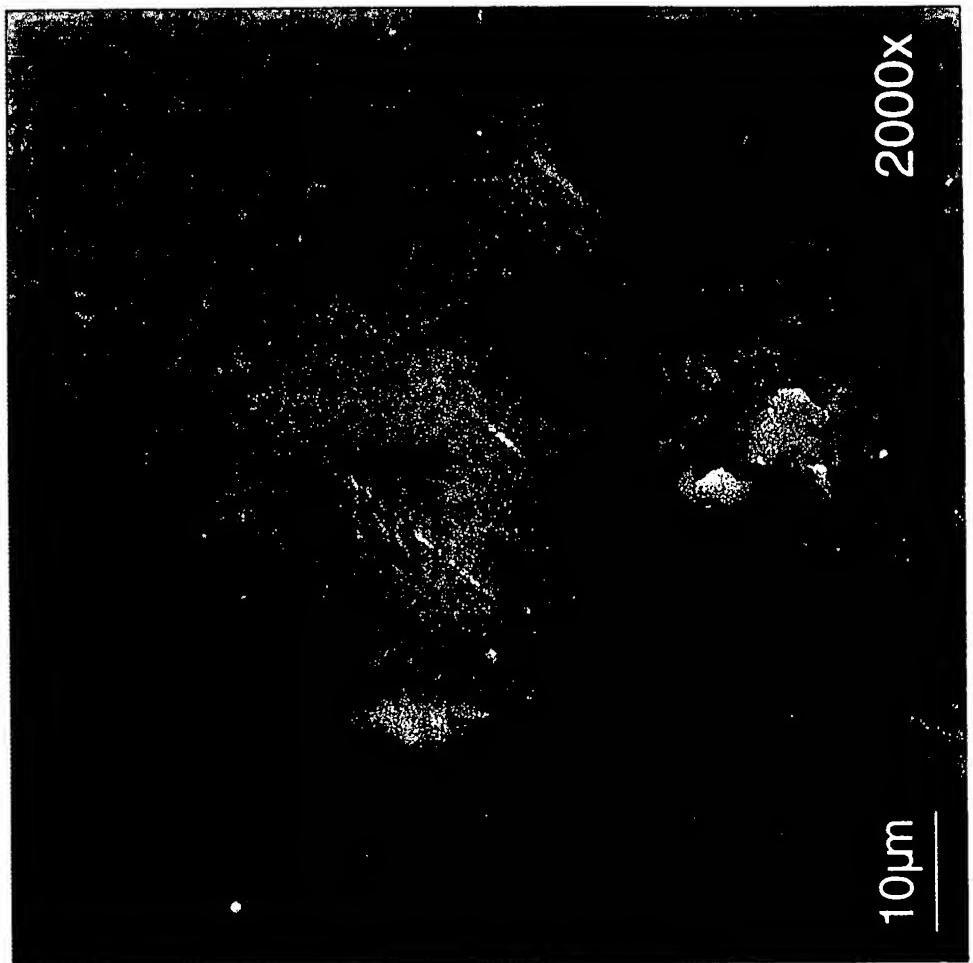
56. IRC Clinical Retrieval



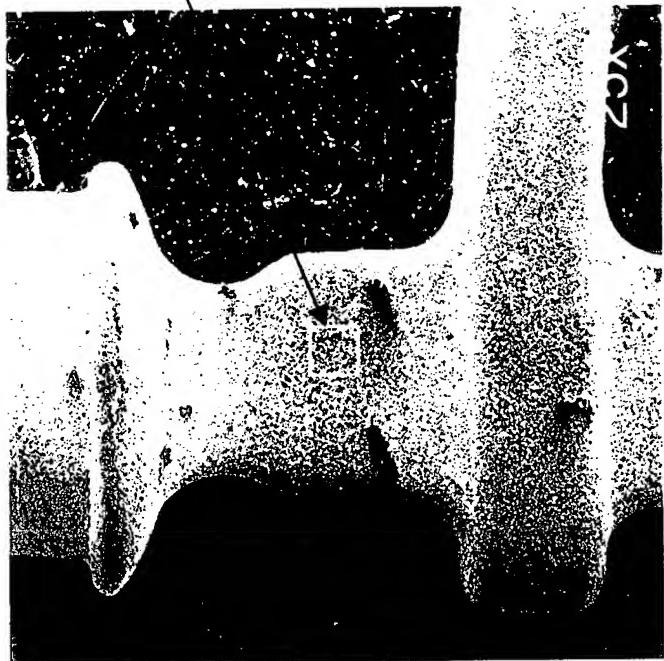
57. Park Dental



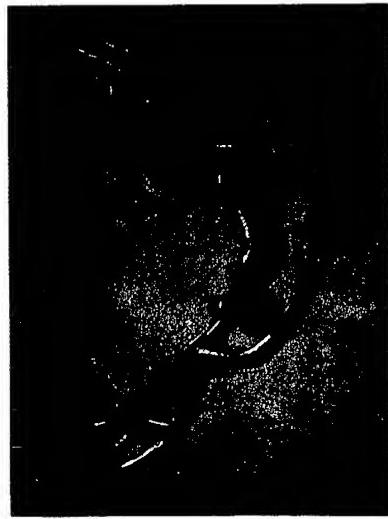
58. Oratronics



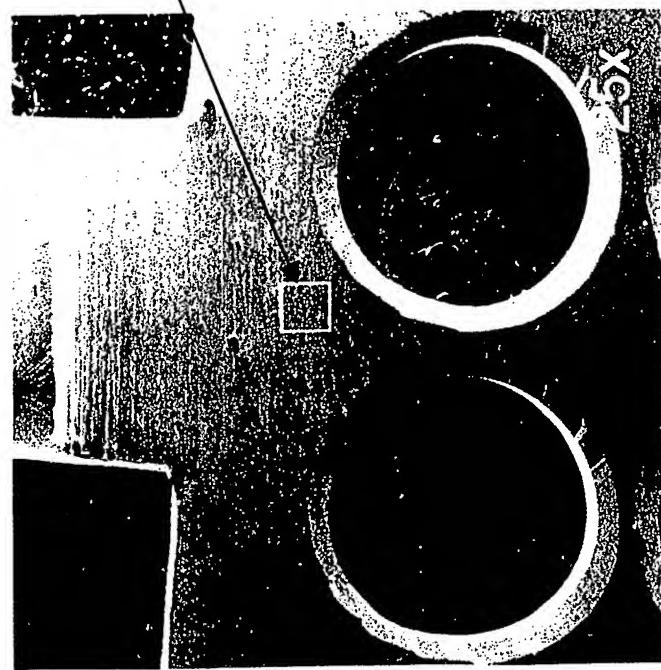
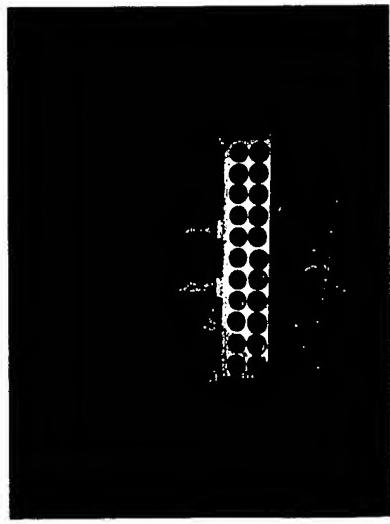
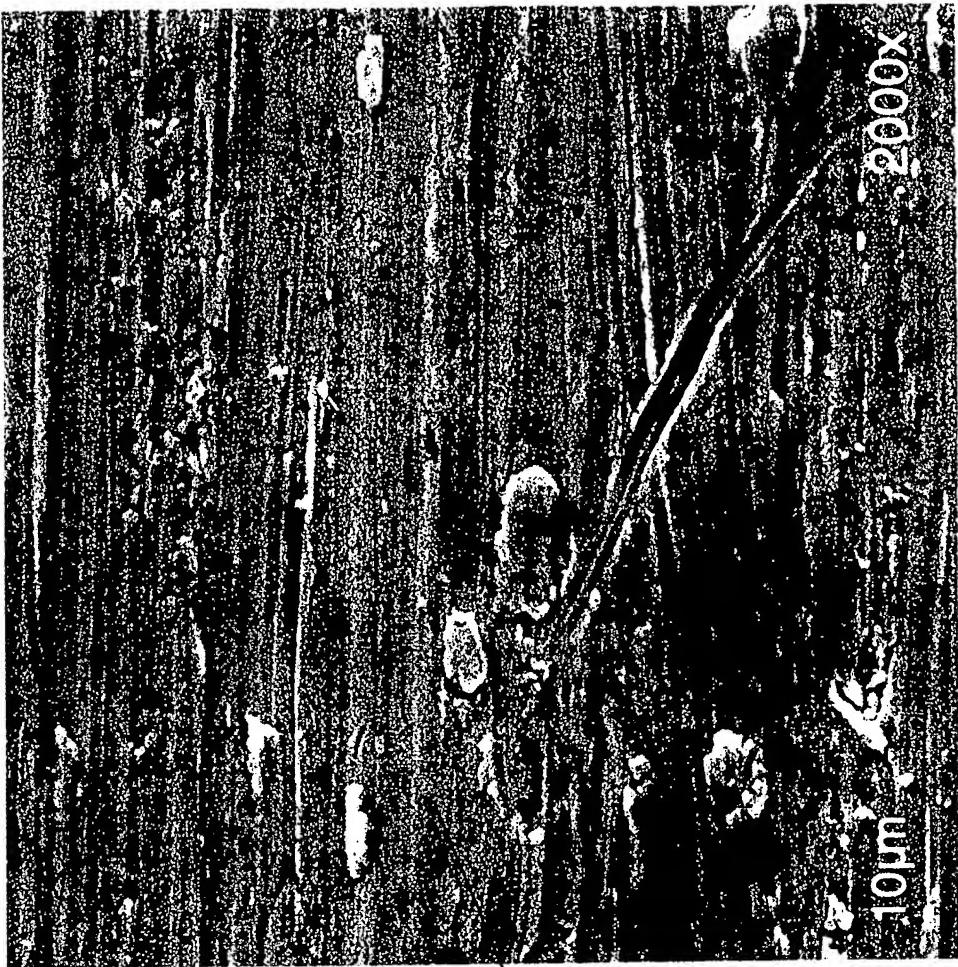
59. Interplant



60. Subperiosteal



61. Continuous Blade



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